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FINGER RINGS.

ORNAMENTS of various kinds have been worn from all ages, both by civilized and uncivilized nations, but it would probably be impossible to point to any single ornament connected with which so much interest attaches as to the finger ring. It is of great antiquity, and during centuries of years has been associated with the most important concerns of life, both in matters of ceremony and affairs of the heart. It has been used as a means of recognition, as a credential, and as a form of introduction which insured hospitality to the bearer of it. Royal edicts were promulgated through its medium, and power was transferred by its means.

When Pharaoh committed the government of Egypt to Joseph he took his ring from his finger, and gave it to the young Israelite as a token of the authority he bestowed upon him. So also when Ahasuerus agreed to Haman's cruel scheme of killing the Jews in all the king's pro-

vinces, he took the ring off his hand and gave it to Haman as his warrant, and afterwards, when he commanded Mordecai to write letters annulling the former decree, he ordered them to be sealed with his ring.

A ring formerly marked the rank and authority of a man, and the king's ring was as important a part of the insignia of royalty as his sceptre or his crown.

The form of the ring is emblematic of eternity and its materials of pricelessness. Lovers are united by a ring, and departed friends are often kept in remembrance by the same token of affection. All these qualities sufficiently explain the reason why in old tales and legends the power of the ring is a fruitful source of interest. The celebrated Sanscrit drama which Kalidasa wrote upon the beautiful Sakuntala turns upon Dushyanta's recognition of his wife by means of a ring which he had given her; and golden rings have frequently been

used by fairies and beautiful demons to seduce men from allegiance to their human loves. The known fact that fish greedily swallow any glittering object thrown into the water has been taken advantage of by old story-tellers, who never tire of relating how lost rings have been found at the proper nick of time in the stomach of a salmon or a mackerel.

In old times the motto of to-day that 'nothing is so successful as success' was by no means universally held, and Polycrates the Samian was so uniformly fortunate that he himself began to fear that the gods did not love him. The wise Egyptian king Amasis persuaded him to propitiate Nemesis by making away with one of his most valued possessions, so he took the advice, and putting out to sea, threw into the gaping wave his beautiful emerald signet ring, engraved by Theodorus, the son of Telecles, a native of Samos. A fish of remarkable size snapped up the ring as it sank, and soon afterwards this fish being served up at the king's table restored to him his ring. Amasis hearing of this last proof of Polycrates' inevitable good luck solemnly renounced his alliance. At last, however, fortune turned, and being taken prisoner by the Persians, Polycrates suffered death by impaling. In the life of Kentigern, related in the *Acta Sanctorum*, there is a legend of a recovered ring. A queen who had formed an improper attachment to a handsome soldier, gave him a ring which had previously been given her by her lord. The king finding the soldier asleep with this ring on his hand, snatched it off and threw it into the river. He afterwards went to his wife to demand it, and she sent secretly to the soldier, who of course could not return it. She now sends in great terror to ask the assistance of the holy Kentigern, who knew the whole affair before, but to help the queen he goes to the river Clyde, and having caught a salmon, takes from its stomach the missing ring, which he sends to her. She joyfully takes it to the king, who, thinking he had wronged her, swears he will be revenged upon her accusers, but she beseeches him to pardon them. As absolution for her sin she confesses it to Kentigern, and vows to be more careful of her conduct in future.

Finger rings are mentioned in the first

book of the Bible, and they appear to have been much worn by the Jews in all ages. The ladies of Palestine adorned their hands with glittering rings, and chiefly valued those which were set with rubies, emeralds, and chrysolites.

Signet rings of gold, silver, and bronze were much worn by the ancient Egyptians, and these were frequently engraved with representations of the sacred beetle or scarabæus. This insect was venerated in Egypt when alive, and was embalmed after death. It was worshipped both as the emblem of the sun and as the symbol of the world. The rings of the lower classes were usually made of ivory and blue porcelain.

Sir Gardner Wilkinson describes a ring in the possession of a Frenchman at Cairo which was one of the largest he had ever seen. It contained twenty pounds' worth of gold, and amongst other devices engraved upon it was the name of a king, the successor of Amunoph III., who lived about 1400 B.C., and was known to the Greeks as Memnon.

There is no reference to rings in Homer, and they do not appear to have been introduced into Greece till a later age than his. The fashion, however, once set, spread fast, and in the time of Solon every freeman throughout Greece wore one signet ring either of gold, silver, or bronze. That statesman to prevent counterfeits, made a law that no seal engraver was to keep in his possession the impression of any seal ring that he had cut for a customer. At a later period the Greeks used rings set with precious stones, and wore two or three at the same time. They were therefore considered as ornaments, and their use extended to women, who wore them of ivory and amber. Demosthenes wore many rings, and he was stigmatized as unbecomingly vain for doing so in the troubled times of the state. The Spartans took a pride in wearing plain iron rings.

The ancient Romans wore iron rings, and purists continued to wear them long after more precious metals were commonly used. Ambassadors wore gold rings as a part of their official dress, and afterwards the privilege was extended to senators, chief magistrates, and the equestrian order, who were said to en-

joy the *jus annuli aurei*. The emperors assumed the right of granting this distinction, which was coveted as a sort of patent of nobility. In time, however, its value declined, and the Emperor Aurelian gave the right to all the soldiers of the Empire; and in the reign of Justinian it had become so common that all citizens were entitled to it.

The introduction of sculptured animals upon the signets of the Romans is said to have been derived from the sacred symbols of the Egyptians. Afterwards, when the practice of deifying princes and venerating heroes became general, portraits of men took the place of the more ancient types; thus the figure of Harpocrates was a fashionable device at Rome in the time of Pliny. Roman rings were massive and of immoderate size, and were consequently found by the effeminate to be too hot for summer wear, so that different kinds were introduced for the various seasons,—

'Charged with light summer rings his fingers
sweat,
Unable to support a gem of weight.'
—Dryden's 'Juvenal.'

In times of sorrow the Roman changed his gold for iron rings; and when he died his rings were often burnt with his corpse.

Rings were placed upon the statues of the deities and heroes, and were put on or taken off according to the festival that was celebrated. Roman rings were often of great value; thus that of the Empress Faustina is said to have cost the immense sum of £40,000, and that of Domitia the still larger amount of £60,000.

The early Christians did not imitate the often indelicate symbols of the Romans, but took devices connected with their faith for their rings, such as the dove, the anchor, fish, palm branch, &c. Ring making was an important branch of the goldsmith's art in the Middle Ages, and a body of artists were called by the French *aneliers*. Rich enamel in curious devices usurped for a time the place of gems, and the workmanship was often of the highest character, Benvenuto Cellini being the chief artist in bringing the art to its greatest perfection.

In our own country rings have been worn by all the races that have successively inhabited it.

'Lo! here is a red gold ring,
With a rich stone;
The lady looked on that ring,
It was a gift for a king.'

—'Sir Degrevant.'
(*Thornton Romances.*)

The old Celtic rings were usually of gold wire. Aildergoidgh, son of Muinheamhoin, monarch of Ireland, who reigned 3070 A.M., is said to have been the first prince who introduced the wearing of gold rings in Ireland, which he bestowed upon persons of merit who excelled in knowledge of the arts and sciences.

Fynes Moryson tells us in his 'Itinerary' 'that the English in great excess affect the wearing of jewels and diamond rings, scorning to weare plaine gold rings or chaines of gold.'

In one of Bishop Hall's Satires we read:—

'Nor can good Myson wear on his left hand
A signet ring of Bristol diamond;
But he must cut his glove to show his pride,
That his trim jewel might be better spy'd.'

Modern rings owe all their beauty to their stones, for goldsmithery is no longer an art, and little attempt is made to obtain elegance of workmanship in the goldwork. In the seventeenth century sharply-pointed pyramidal diamond rings were much used for writing names and verses on glass, and few of the wits and fops of the day were without one.

Among the Jews the middle or little finger of the right hand was that upon which the ring was worn, and the signet was always upon the right hand, as appears by the passage in Jeremiah,—'As I live, saith the Lord, though Coniah, the son of Jehoiakim, king of Judah, were the signet upon my right hand, yet would I pluck thee thence.' Bishops, probably following Biblical precedent, wore their official rings upon the right hand. This, however, was opposed to the practice of the Egyptians, who considered the fourth finger of the left hand as the ring finger. Still they did not confine themselves to that finger, for there is a figure of a woman on a mummy case in the British Museum in which the fingers and thumbs of both hands are covered with rings.

Among the Romans plain rings were worn originally on either hand at option, but when gems and precious stones were

added they were worn by preference on the left, and it was considered exceedingly effeminate to wear them on the right hand. At first only one ring was worn, then one on each finger, and, lastly, one on each joint. Charinus, according to Martial, wore sixty rings daily, or six on each finger, and did not take them off at night, but slept in them. This was an extreme case; but rings were often worn on every finger and also on the thumbs. In Germany rings were frequently worn upon the joints, as was the Roman custom. The wife of Sir Humphrey Stafford (1450) is sculptured in Bromsgrove Church, Worcestershire, with a ring on every finger but the last one of the right hand. Massive thumb rings were supposed to tell of wealth and importance, and Falstaff declared that when young he could have crept into an alderman's thumb ring.

The annular finger is now always the fourth finger, counting the thumb as the first, and it is necessary to bear this in mind, for sometimes the mistake is made of counting from the forefinger.

Rings have played an important part in the history of the world. They have been used by the king to unite him to his kingdom, by the bishop to his see, and the abbot to his monastery. Special interest attaches to the ring with which the Doge of Venice married the Adriatic on Ascension Day, when he addressed it in these words:—"We espouse thee, O Sea! as a token of our perpetual dominion over thee"—a vaunt that has long been proved to be groundless.

We will now, before proceeding further, stop to make note of a few historical rings. One of the most interesting that has come down to our times is the signet ring of Mary Queen of Scots, now in safe keeping among the treasures of the British Museum. Sir Henry Ellis was of opinion that this was Mary's nuptial ring when she was married to Darnley, and that it affords the earliest instance of her bearing the royal arms of Scotland alone after having discarded the arms of France. When Dauphiness, she and her husband had quartered the arms of England, which gave great offence to Queen Elizabeth. Within the ring is a monogram formed of the letters M and A, which is of great historical interest, because Sir Henry Ellis has point-

ed out that in a letter from Mary to Elizabeth, written just before her marriage, she used the same monogram, probably as a puzzle for the Queen of England and her Councillor Burghley. The clue was, however, given to them when Darnley was created Duke of Albany. Another interesting ring is the one which Queen Elizabeth is supposed to have sent to the Earl of Essex, but which was never delivered to him. It is of gold, with the head of the queen cut on hard onyx, and it is now in the possession of the Rev. Lord John Thynne, who is descended from Lady Frances Devereux, Essex's daughter. Aubrey relates that Queen Elizabeth had a double ring, made with two diamonds, which formed a heart when joined. She kept one half, and sent the other to Mary Queen of Scots, as a token of her constant friendship; but, as Aubrey adds, 'she cut off her head for all that.' Mary commissioned Beatoun to take back her ring to Elizabeth, when she determined to seek an asylum in England. Before dismissing the maiden queen we may mention that her coronation ring was filed off her finger a little before her death, on account of the flesh having grown over it.

In 1765 a very beautiful and perfect gold ring was found by a workman among the ruins of the North Gate House, on Bedford Bridge, when that building was pulled down. In this prison the world-famed dreamer, John Bunyan, was confined, and there is little doubt that this was his ring. It bears his initials, *J. B.*, and is engraved with a death's head, and the words '*memento mori.*' The ring was sold to Dr. Abbot, chaplain to the Duke of Bedford, and presented by him, in his last illness, to the Rev. G. H. Bower, perpetual curate of Elstow, where Bunyan was born.

In the Londesborough Collection is the identical ring which the Prince of Orange (afterwards William III.) gave to the Princess Mary. It is made of gold, set with diamonds, and enamelled black. Outside is engraved '*Honi soit qui mal y pense,*' and inside is the posy, '*I'll win and wear you if I can.*' It is doubtful whether this ring was presented before marriage or after; if the latter the motto may be understood as referring to William's design of contesting the crown of England with his wife's father.

The signet ring of Caesar Borgia was exhibited a few years ago at a meeting of the British Archaeological Association, by the Rev. C. H. Hartshorne. It is of gold, slightly enamelled, with the date 1503, and round the inside is the motto '*Fays ceque doys avien que pourra.*' A box dropped into the front, having on it *Borgia*, in letters reversed, round which are the words '*Cor unum una via.*' At the back is a slide, within which it is related he carried the poison he was in the habit of dropping into the wine of his unsuspecting guests. Hannibal carried poison about with him in a ring, and when all his hopes were gone he swallowed the poison, and died. Pope Alexander VI. (Borgia) possessed a key-ring such as was used by the Romans, which contained poison. When he wished to get rid of an objectionable friend he gave him his ring to unlock a casket, and as the lock was a little hard to open the pin concealed within gave the fatal prick. Rings of the same kind of workmanship, but not with so deadly a design, have been common, and keys intended to open invaluable caskets were often attached to rings. In referring to these singularities, we ought not to omit the mention of a ring made with a watch in the boss, which could be so wound up that it would make a small pin prick the person who wore it at any hour of the night he pleased.

Ladies have always been ready to give up their valuables in times of national distress, but they have perhaps never been so nobly rewarded for their devotion as during the great war of Liberation in Germany. The ladies sent their jewels and ornaments to the treasury for the public service, and they each received in return an iron ring, with the emphatic eulogy, '*Ich gab Gold um Eisen*' (I gave gold for iron).

We must now turn to the consideration of some official rings. Episcopal rings are of great antiquity, and the newly made bishop in the Roman Catholic Church is invested with a ring by which he is married to the Church, as a part of his consecration. In the romance of King Athelstan, printed in Hartshorne's '*Ancient Metrical Tales*,' the king says to the offending archbishop:—

'Lay down thy cros and thy staff,
Thy myter and thy ryng that I thee gaff—
Out of my land thou flee.'

In 1194 the fashion of the episcopal ring was settled by Pope Innocent III., who ordained that it should be of solid gold, and set with a precious stone, on which nothing was to be cut. The stones usually chosen were ruby, indicating glory, emerald for tranquillity and happiness, and crystal for simplicity and purity. These rings were usually signets, and were sometimes used for special objects; thus in Spain and France the bishops sealed up with them the baptismal fonts from the beginning of Lent to Holy Saturday.

Before the ring is conferred it is blessed, and the ceremonial of investiture takes place before the pastoral staff and mitre are received. If a new pope is already a bishop, as is usually the case, he does not receive a ring, but if not one is presented to him with the usual formula. The ring was formerly worn on the index finger of the right hand when the blessing was given, and then changed to the annular finger at the celebration of mass. It is now always worn on the annular finger of the right hand. As the ring was made large enough to be worn over a glove, a guard ring was often necessary, to prevent it from falling off, when worn without one.

The Pope's seal ring is not worn by him, but has been used for sealing briefs apostolic from the fifteenth century. Prior to that period it was employed for the private letters of the popes. The ring of the fisherman, a signet ring of steel, is in the keeping of the cardinal chamberlain, or chancellor, and is broken with a golden hammer on the death of every pope, and a new one made for the new pope. The use of the ring was granted to cardinals about the twelfth century. A cardinal's ring is set with sapphire, to denote the high priesthood, and is given when a title is assigned to him. The gift, however, is not free, for the new prince of the Church has to pay a large fine on receiving it. The cardinals wear their rings at all times, but on Good Friday they lay them aside, as a sign of the mourning in which the Church is placed for her spouse. It was the custom to bury the cardinal with his ring on his finger, as was done with the king and other great men. When tombs have been opened the ring has usually been found upon the finger of the defunct. Thus it was with our Henry II.,

Richard II., and Matilda, wife of William the Conqueror; and in France the body of Childeric was discovered with his regalia and coronation ring. Graves were sometimes violated by robbers, in order to obtain the treasures within, and assaults were even made upon the corpse as it was carried to be buried. Most ornaments have at different times come under the ban of the religious as vanities and snares, but rings have always been looked upon with favor by the Church. Decade rings have sometimes been used in place of the ordinary rosary of beads. They were mostly made of ten, but sometimes of more knobs. Ten knobs or bosses indicate the number of aves; eleven bosses, ten aves and a paternoster, the last being marked by a larger boss than the others. Twelve knobs were intended to express that the creed was to be repeated at the twelfth. Reliquary rings, in which some sacred relique was inclosed, were at one time in common use.

To pass from the Church to the law we must not omit to mention the well-known serjeant's ring. Every serjeant-at-law, on being sworn in, presents rings of pure gold with a motto on them, to such persons as come to the inauguration feast, to the law officers, and certain other officials of importance. The values of the various rings are proportioned to the rank of each recipient, and one of very large dimensions, with the motto inscribed in enamel, is given to the sovereign. On the admission of fourteen serjeants, in 1737; 1409 rings were given away, at a cost of £773, and besides this number there were others made for each serjeant's own account, to be given away to friends at the bar, attorneys, &c., which came to more than all the rest of the expense. Lists of the mottoes on many of these rings have been printed in 'Notes and Queries,' but as they are not of any great interest, we do not insert them here, merely mentioning Lord Brougham's suggestion of a motto on a certain occasion. Some barristers that Brougham did not think much of wished to be made serjeants, and the ex-chancellor suggested that the most appropriate motto that could be found for their rings would be the old legal word '*scilicet*.'

Rings with punning devices or re-

buses, heraldic emblems, &c., engraved upon them, were introduced early in the fifteenth century, and soon became very common. In the old newspaper, *Mercurius Publicus*, for November 29th, 1660, there is a curious and interesting story which illustrates our subject. On the disbanding of a certain regiment at the Restoration, the men were given a full week's pay in addition to their arrears, when they all unanimously resolved to buy each man a ring with the week's pay, the posy of which should be the *King's Gift*. Certain stones were set in rings, with a special meaning in superstitious times, as we shall see further on, but in later days all kinds of stones have been used, to suit the varied fancy of the wearer. Giardinetti rings, of a floriated design, in which colored stones represented flowers, were used at one time as keepers. At the commencement of the nineteenth century harlequin rings, which were set with several variously colored stones, were fashionable. Swift, writing to Pope, respecting Curll and the 'Dunciad,' says:—'Sir, you remind me of my Lord Bolingbroke's ring, you have embalmed a gnat in amber;' and Pope himself refers to this substance, which is one of the most ancient of ornaments, in the following lines:—

'Pretty! in amber to observe the forms
Of hairs, or straws or dirt, or grubs or worms;
The things we know are neither rich nor rare,
But wonder how the devil they got there.'

Rings, which are now looked on merely as ornaments, without meaning, except in the cases of the wedding and engaged rings, were formerly considered to be full of occult significance. Certain stones represented virtues, and others were famed for their magical value. The Poles believe that each month of the year is under the influence of a precious stone which exerts its power over the destiny of any person born during the period of its sway. It is therefore customary among friends and lovers to make reciprocal presents of trinkets ornamented with the natal stones. The following is a list of the stones peculiar to each month with their meanings:—

January.—Garnet: Constancy and Fidelity.
February.—Amethyst: Sincerity.
March.—Bloodstone: Courage and Presence of Mind.

April.—Diamond: Innocence.
 May.—Emerald: Success in Love.
 June.—Agate: Health and long life.
 July.—Cornelian: Contented mind.
 August.—Sardonyx: Conjugal felicity.
 September.—Chrysolite: Antidote against madness.
 October.—Opal: Hope.
 November.—Topaz: Fidelity.
 December.—Turquoise: Prosperity.

As might be expected in so fanciful a matter, the moral qualities attributed to the stones vary greatly according to different authorities, and moreover, other gems than those mentioned above have been set apart as emblems of the different months.

Rings, which were supposed to charm away all the ills of life, were once worn, and the Arabians have a book written exclusively on magic rings called 'Salcuthat.' The most wonderful of all these rings was that one, which is said to have been found in the belly of a fish, and was transferred in regular succession from Jared, the father of Enoch, to Solomon. This ring of Solomon's was that with which refractory Gins were sealed up in jars before they were thrown into the sea, as we read in the 'Arabian Nights.' The ring of Gyges, king of Lybia, was also of great note. He is said to have found it in a grave, and when he wore it with the stone turned inwards, he was rendered invisible to human eyes. Many other rings, however, have been supposed to possess the same power as that of Gyges, and it was a belief in the Middle Ages that rings with certain cabalistic words upon them rendered their wearers invisible.

Rings were used among many different nations as charms and talismans against the evil eye and demons, against debility, the power of the flames, and most of the ills inherent to human nature. Sometimes the virtue existed in the stone, and sometimes in the device or inscription or magical letters engraved upon them.

Magic rings made of wood, bone, or other cheap material were manufactured in large numbers at Athens, and gifted with whatever charm was required by the purchaser. Execetus, the tyrant of the Phocians, carried about with him two rings, which he struck together to divine by the sound emitted what he had to do or what was to happen to him.

The Gnostics engraved gems with mystic figures, all of which were supposed to have their value. The word *Ananiasapta* was a favorite inscription, and the names of the three kings of Cologne, or the wise men of the East, viz., *Jasper*, *Melchior*, and *Baltazar* were used as a powerful charm. Réynard the fox boasts of the virtues of the ring he possessed with the three names that Seth brought out of Paradise when he gave his father Adam the oil of mercy, and tells how, whoever bears these three names, shall never be hurt by thunder or lightning, nor by witchcraft, nor be tempted to sin, nor catch cold, though he lay three winters' nights in the fields in the snow, frost, and storm.

Devotional rings, with the names of Jesus, Maria, and Joseph engraved on them, were used as a preservative against the plague. The various figures engraved on rings all had their hidden meaning. Thus Pegasus or Bellerophon was good for warriors, as it gave them boldness and swiftness in flight. Orion made the wearer victorious in war, and Mercury gave wisdom and persuasion. The representation of St. Christopher was an amulet against sudden death, particularly by drowning, and that of Andromeda conciliated love between man and woman. Hercules strangling the Nemean lion cured the colic, and protected the combatant who wore it.

A copper ring with the figure of a lion, a crescent and a star worn upon the fourth finger, was considered to be a cure for the stone. A dog and a lion together preserved the wearer from dropsy or pestilence, and the hare was a defence against the devil.

A figure of the imaginary cockatrice was worn as a talisman against the evil eye. This creature was supposed to be produced from a cock's egg, and is described by Sir Thomas Brown in his 'Vulgar Errors' as having 'legs, wings, a serpentine and winding tail, and a crest or comb somewhat like a cock.' Its eye was so deadly as to kill by a look:—

'Say thou but "I," [aye]
 And that bare vowel "I" shall poison more
 Than the death-darting eye of cockatrice.'
 —'Romeo and Juliet,' iii. 2.

In the Londesborough collection is a very remarkable ring, on which is represented a toad swallowing a serpent,

which illustrates an old superstition. There is a proverb that 'a serpent to become a dragon must eat a serpent,' and the same metamorphosis was supposed to take place with other crawling creatures, as appears in many allusions in the poets, so that this toad may be expected to turn into a dragon.

Rings composed of different substances have been commonly employed for superstitious purposes. Thus rings of gold were thought to cure St. Anthony's fire; and Marcellus, a physician who lived in the reign of Marcus Aurelius, directed the patient afflicted with pain in the side to wear a ring of pure gold, inscribed with Greek letters, on a Thursday at the decrease of the moon. The ring was to be worn on the right hand if the pain was in the left side, and on the left hand if the pain was in the right side.

Brand acquaints us that in Berkshire a ring, made from a piece of silver collected at the Communion, is a cure for convulsions and fits of all kinds. If collected on Easter Sunday, its efficacy is greatly increased. A silver ring made of five sixpences collected from five different bachelors, to be conveyed by the hands of a smith, who is a bachelor, will cure fits. None of the persons who give the sixpences are to know for what purpose they are collected. A ring made from silver contributed by twelve young women, constantly worn on one of the fingers, cures epilepsy. Trallian, in the fourth century, cured the colic with the help of an octangular ring of iron on which eight words were engraven, and by commanding the bile to take possession of an unfortunate lark.

Rings made from the chains of criminals and iron taken from a gallows were once in great repute for curing divers diseases. In Devonshire, rings were made of three nails or screws that had been used to fasten a coffin, or had been dug up out of a churchyard. Lead mixed with quicksilver was used as a preservative against headache. Rings were sometimes made to enclose a herb famed for healing virtues which was cut at certain times; and Josephus relates that a man drew devils out of those possessed by putting a ring, containing a root mentioned by Solomon, to the nostrils of the demoniac.

Most precious stones were formerly

supposed to be endowed with medicinal properties and virtues, and among them jasper took the lead in value, Galen himself vouching for its admirable qualities from his own ample experience. It cured fevers and dropsies, stopped hemorrhages, baffled the effects of witchcraft, and promoted parturition. Emerald jasper was pre-eminent in these qualities, and, moreover, insured chastity and continence to the wearer, on which account ecclesiastics wore emerald rings.

In T. Cutwode's 'Caltha Poetarum; or, the Bumble Bee' (1599) is the following reference to this quality:—

'She ties a necklace underneath her chin
Of jasper, diamond, and of topasie:
And with an emerald hangs she on a ring
That keeps just reckoning of our chastitie.

And therefore, ladies, it behoves you well
To walk full warily, when stones will tell.'

A jasper ring, with a runic inscription translated as

'Raise us from dust we pray to thee;
From pestilence oh set us free,
Although the grave unwilling be,'

was exhibited before the Society of Antiquaries in 1824. The runes used for magical and supernatural purposes are known by the general appellation of Ram-runes, that is strong or bitter runes, and in a learned paper by Francis Douce ('Archæologia,' vol. xxi.), they are classed as follows:—

1. Malrunes used in considering and revenging injuries.
2. Sigrunes gave victory in all controversies to those who used them.
3. Limrunes, when marked on the bark or leaves of trees that inclined to the south, cured diseases.
4. Brunrunes, or fountain runes, used to insure safety at sea to men and property.
5. Hug or hogrunes were runes of the mind, and made their user excel all his companions in mental vigor.
6. Biargrunes used to protect lying-in women.
7. Swatrunes used in practising the black art.
8. Willurunes or deceitful letters.
9. Klaprunes were not written, but made by motions.
10. Trollrunes or devil letters were used for divination or enchantment.
11. Alrunes or alrunes destroyed the allurements or deceptions of strange women.

The turquoise or Turkish stone was supposed to have many and various good

qualities that made it second only to jasper in popular estimation. Shylock's ring that he would not have lost 'for a wilderness of monkies' was a turquoise. This stone was believed to strengthen the sight and spirits of the wearer, to take away all enmity, and reconcile man and wife, and to move when any peril was about to fall upon the wearer. This last quality is alluded to in Ben Jonson's 'Sejanus'—

'And true as turkoise in the dear Lord's ring
Look well or ill with him.'

And also by Dr. Donne—

'A compassionate turquoise that doth tell
By looking pale the wearer is not well.'

However, the most wonderful virtue of all was that it protected its wearer from injury from falls, so that however serious the danger the stone only broke, and the wearer escaped unhurt. Anselmus de Boot or Boethius, in his work on 'Precious Stones' (1609), gives a circumstantial account of his own escapes from falls due to his wearing a turquoise ring.

The toadstone, also known as crapaudine and batrachites, was considered in old times as an amulet of the greatest power. It was a sovereign remedy for many disorders, and was sometimes lent to the sick, but only on a bond for its safe return, in which its value was rated at a very large amount. Joanna Baillie writing to Sir Walter Scott in 1812, tells him of a toadstone ring which was repeatedly borrowed from her mother as a protection to new-born children and their mothers from the power of the fairies. In Ben Jonson's 'Fox' (Act 2, scene 3), a ring of this kind is referred to:—

'Or were you enamour'd on his copper rings,
His saffron jewel, with toadstone in't!'

The toadstone was set open in a ring so that it should touch the finger, as one of its chief virtues was to burn the skin at the very presence of poison. It was of old supposed to be found in the heads of old toads, a belief which Shakespeare refers to in one of his most admired passages—

'Sweet are the uses of adversity,
Which, like the toad, ugly and venomous,
Wears yet a precious jewel in his head.'

The credulous Lupton gives directions how to obtain the stone. He says an

overgrown toad must be put into an earthen pot and placed in an ant's hillock, when the ants will eat up the toad, and the stone will be left in the pot. This, he adds, 'has often been proved.' To know whether a toadstone is true or not, Lupton says you must hold it before a toad so that he may see it. If it be good the toad will leap towards it, and make as though he would snatch it from you, 'for he envieth so much that a man should have that stone.' These were the chief favorites of our ancestors, but many other stones and gems were highly prized for their qualities besides these three; thus agate rendered athletes invincible, cured the sick, and enabled its wearer to gain the love of all women. Amber was good against poison, and it is still prized for its electrical qualities, qualities which take their name from it. Amethyst was an antidote against drunkenness, and if the sun or moon was engraved upon it, it was a charm against witchcraft. Blood-stone checked bleeding at the nose, if the words '*sanguis mane in te*' were repeated three times on application. According to Monardes, a Spanish physician of the sixteenth century, the Indians of New Spain valued it for this property. Carbuncle emitted native light, and Martius, in 'Titus Andronicus,' when he falls into a dark pit, discovers the body of Bassanius by the light of the jewel on the dead man's hand.

'Upon his bloody finger he doth wear
A precious ring, that lightens all the hole,
Which like a taper in some monument
Doth shine upon the dead man's earthy
cheeks,
And shows the ragged entrails of this pit:
So pale did shine the moon on Pyramus,
When he by night lay bathed in maiden blood.'

Coral hindered the delusions of the devil. Crystal clouded if evil was about to happen to the wearer, and it was formerly much used by fortune tellers. Diamond was an antidote against all poisons. Opal sharpened the sight of its possessor, and clouded the eyes of those who stood about him. Ruby changed its color if any calamity was about to happen to the wearer of it. Wolfgang Gabelchow relates the following instance of this property:—

'On December 5, 1600, as I was travelling from Stuttgard to Calloa, in company with my beloved wife Catherine Adelman, of pious me-

mory, I observed most distinctly during the journey that a very fine ruby, her gift, which I wore set in a ring upon my finger, had lost once or twice almost all its splendid color, and had put on obscurity in place of splendor, and darkness in the place of light, the which blackness and dulness lasted not for one or two days only, but several: so that being above measure alarmed, I took the ring off my finger and locked it up in my trunk. Wherefore I repeatedly warned my wife that some grievous misfortune was impending over either her or myself, as I had inferred from the change of color in my ruby. Nor was I deceived in my forebodings, inasmuch as within a few days she was taken with a mortal sickness that never left her till her death. After her decease, indeed, its former brilliant color again returned spontaneously to my ruby.'

Sapphire possessed the same virtue as the bloodstone of checking bleeding at the nose. Topaz cured and prevented lunacy, increased riches, assuaged anger and sorrow, and averted sudden death. When such blessings as these were supposed to fall to the lot of the possessor of one of these precious stones, who can be surprised at the value set upon them? The old Greek poem on 'Gems,' which goes by the name of Orpheus, contains a full account of the magical qualities of stones, and the ring mentioned in the following passage from 'Sir Perceval of Galles' (*Thornton Romances*) must have been set with one of the jewels we have enumerated above—

'Siche a vertue es in the stane,
In alle this werlde wote I nane
Siche stone in a rynge;
A mane that had it in were [war]
One his body for to bere,
Ther schold no dyntys hym dere
Ne to dethe brynge.'

Other things besides precious stones were of old supposed to possess curative virtues; thus a ring made from the hoof of an elk was held to protect the wearer from epilepsy, and Michaelis, a physician at Leipsic, pretended to cure all diseases with a ring made of the tooth of a sea-horse. Sir Christopher Hatton sent a ring to Queen Elizabeth to protect her from all infectious airs, which was not to be worn on her finger, but to be placed in her bosom—the chaste nest of pure constancy.

We do not always look for wisdom in the rulers of the earth, and therefore need not be surprised that a superstitious observance was upheld by the kings of England. Similar to the curious prac-

tice of touching for the king's evil was that of hallowing cramp rings. Every Good Friday the king hallowed with much ceremony certain rings, the wearers of which were saved from the falling sickness. The practice took its origin from a ring long preserved with great veneration in Westminster Abbey, which was supposed to have great efficacy against the cramp and falling sickness, when touched by those who were afflicted by either of those disorders. The ring was reported to have been brought to Edward the Confessor by some persons coming from Jerusalem, and to have been the same that he had long before given privately to a poor man who had asked alms of him for the love he bore to St. John the Evangelist. In the 'Liber Niger Domus Regis Edw. IV.' is the following entry:—'Item to the kynge's offerings to the crosse on Good Friday out from the countynghouse for medycynable rings of gold and sylver delyvered to the jewel house xxv s.' The practice was discontinued by Edward VI., but in the previous reign Anne Boleyn sent some rings to a Mr. Stephens, with the following letter:—'Mr. Stephens, I send you here cramp rings for you and Mr. Gregory and Mr. Peter, praying you to distribute them as you think best.' Galvanic rings are still worn, and are believed to cure rheumatism.

We need only mention in passing such rings as were used for scientific and practical purposes, viz., meridian, solar, and astronomical rings, and at once treat of those which are connected with the affections. Inscriptions upon rings are now comparatively rare, but in old times they were common. It is supposed that the fashion of having mottoes, or 'reasons,' as they were called, was of Roman origin, for the young Romans gave rings to their lady-loves with mottoes cut on gems, such as 'remember,' 'good luck to you,' 'love me, and I will love thee.' In the fourteenth and fifteenth centuries the posy was inscribed on the outside of the ring, and in the sixteenth and seventeenth centuries it was placed inside. In the year 1624 a little book was published with the following title:—'Love's garland; or posies for rings, handkerchiefs, and gloves, and such pretty tokens that lovers send their loves.' Some of these

mottoes have become pretty well hackneyed in the course of years; thus the Rev. Giles Moore notes in his journal under the date 1673-4, 'Bought for Ann Brett a gold ring, this being the posy—"when this you see remember me." In some cases instead of words the stones are made to tell the posy by means of acrostics; thus to obtain *Love* the following arrangement is made—

L apis lazuli,
O pal,
V erde antique,
E merald;

and for *Love me*, malachite and another emerald are added.

For the words *Dearest* and *Regard* the stones are arranged as follows:—

D iamond,
E merald,
A methyst,
R uby,
E merald,
S apphire,
T opaz.

R uby,
E merald,
G arnet,
A methyst,
R uby,
D iamond.

At the time of O'Connell's agitation in Ireland rings and brooches were set with the word *Repeal*, thus:—

R uby,
E merald,
P earl,
E merald,
A methyst,
L apis lazuli.

In one of these rings belonging to a gentleman the lapis lazuli dropped out, and he took it to a working jeweller in Cork to be repaired. When he got it back, however, he found topaz in place of the lapis lazuli, and therefore he told the workman a mistake had been made. 'No mistake,' answered the jeweller, 'it was Repeal; let us *repeat*, and we may have it yet.'

Names are sometimes represented on rings by the same means; and the Prince of Wales on his marriage to the Princess Alexandra gave her as a keeper one with the stones so set as to represent his familiar name of *Bertie*, as follows:—

B eryl,
E merald,
R uby,
T urquoise,
I acinth,
E merald.

The French have precious stones for all the alphabet with the exception of f, k, q, y, and z, and they obtain the words *Souvenir* and *Amitié* by the following means—

S aphir or sardoine,
O nux or opale,
U raine,
V ermeille,
E meraude,
N atralithe,
I ris,
R ubis or rose diamant.

A méthiste or aigue-marine,
M alachite,
I ris,
T urquoise or topaze,
I ris,
E meraude.

The fyancel or wedding ring is supposed to have originated at Rome, where it was usually given at the betrothal as a pledge of the engagement, and its primitive form was that of a signet or seal ring. The practice of the wife wearing the betrothed ring after marriage, and the husband the wedding ring, has been a common one in Germany. The betrothed and wedding rings of Luther have been preserved safely in his native country. The first is of gold elaborately worked with the various symbols of the Passion of the crucified Saviour, as the spear, the hyssop, the rod of reeds, the dice, &c., and the whole is surmounted with a ruby, the emblem of exalted love. Inside are the names of the betrothed pair, and the date of the marriage (*Der 13 Junii, 1525*). This ring was presented by Luther to Catharine Boren at the betrothal, and was worn by her then and after the marriage. The workmanship is very elegant, and it has been supposed that it was designed by the great reformer's friend Lucas Cranach, but the design was by no means an uncommon one. A gold ring was found in Coventry Park, near the Town Hall, in the autumn of 1802, by a person digging potatoes, on which was represented the Saviour rising from the sepulchre with the hammer, ladder, sponge, and other emblems of his passion by Him. Five wounds were

shown, which represented the wells of everlasting life, of mercy, pity, grace, and comfort. This was an amulet, and inside were inscribed the names of the three kings of Cologne. The wounds of Christ were often engraved upon rings, and Sir E. Shaw, alderman and goldsmith, directed by his will (*circa* 1487) that sixteen rings should be made of fine gold with representations of the wells of pity, mercy, and everlasting life, and given to his friends.

The interchanging of rings was a prominent feature of the ancient betrothing ceremony, but appears not to have taken place at the marriage. When Proteus leaves Julia in the 'Two Gentlemen of Verona,' the lovers exchange rings—

'Julia.—If you turn not, you will return the sooner;
Keep this in remembrance of thy Julia's sake. (Gives him a ring.)
Proteus.—Why then we'll make exchange; here take you this.
(Gives her another.)'

In betrothals it was a common custom for lovers to break a piece of gold, and for each party to keep half; sometimes a ring was broken.

'A ring of pure gold she from her finger took,
And just in the middle the same then she broke:
Quoth she, as a token of love you this take,
And this as a pledge I will keep for your sake.'
—Exeter Garland.'

Among the Italians of the fifteenth and sixteenth centuries it was usual for ladies to give their lovers rings which contained their portraits, and were made with the *fede* or two hands clasped. It was usual also for lovers to wear the rings given to them by their mistresses on holidays, as we find in 'England's Helicon' (1600)—

'My songs they be of Cinthia's prayse,
I weare her rings on holly-dayes.'

Bassanio and Gratiano give the rings which they received respectively from Portia and Nerissa to the young doctor and his clerk after the discomfiture of Shylock, although Portia had said—

'This house, these servants, and this same myself,
Are yours my lord: I give them with this ring:
Which when you part from, lose, or give away,
Let it presage the ruin of your love,
And be my vantage to exclaim on you.'

And Bassanio had answered—

'When this ring
Parts from this finger, then parts life from hence:
O then be bold to say, Bassanio's dead!'

Imogen gives her husband Posthumus a ring when they part, and he gives her a bracelet in exchange. 'Although,' he says, 'my ring I hold dear as my finger, 'tis part of it;' yet he gives it up to Iachimo to test the virtue of his wife. In Beaumont and Fletcher's 'Cupid's Revenge,' a lady describes a man's presents to his mistress—

'Given earrings we will wear!
Bracelets of our lovers' hair,
Which they on our arms shall twist,
With their names carv'd on our wrist.'

Sometimes the man gave a ring to his lady. In Davison's 'Rhapsody' (1611) there is a sonnet from one who sent his mistress a gold ring with the posy 'pure and endless;' and when Richard III. brings his rapid wooing to a conclusion, he gives Lady Anne a ring, saying:—

'Look how this ring encompasseth thy finger:
Even so thy breast encompasseth my poor heart;
Wear both them, for both of them are thine.'

In Spain the gift of a ring is looked upon as a promise of marriage, and is considered sufficient proof to enable a girl to claim her husband. In the fifteenth century love rings occur with the orpine (*Telephium*), commonly called *Midsummer men*, engraved upon them, a device which was chosen because the bending leaves of that plant are presumed to prognosticate whether love was true or false. It was used for love divination late into the last century.

The gimmel, jimmel, gimbal, or gimon ring, was a pretty invention which continued a favorite for many years. It was a twin or double ring, and took its name from the word *gemelli*. Sometimes it was formed of three pieces of gold wire and even four occasionally, in the latter case the result was a puzzle ring.

'Thou sent'st to me a true-love knot; but I
Return a ring of *jimmals*, to imply
Thy love had one knot, mine a triple tie.'
—Herrick.

At first it was a simple love token, but afterwards was converted into a ring of affiance; the lover putting his finger

through one of the hoops and his mistress hers through the other—

'A curious artist wrought 'em
With joints so close as not to be perceiv'd;
Yet are they both each other's counterpart;
Her part had *Juan* inscrib'd and his had *Zayda*
(You know those names were theirs): and in
the midst
A heart divided in two halves was plac'd.
Now if the rivets of those rings inclosed
Fit not each other, I have forg'd this lye:
But if they join, you must forever part.'
—Dryden's 'Don Sebastian.'

Mr. Crofton Croker in his privately-printed catalogue of Lady Londesborough's collection, describes and figures a very interesting jimmal ring, consisting of three rings, which separate and turn on a pivot. The two outer ones were united by two clasped hands which concealed two united hearts upon the middle one, which was toothed at the edge. The following is the account given of the use to which the ring had been put:—

'There can be little doubt from the specimens which have come under observation, that it had been used as a betrothing ring by an officer of the king's German legion with some Irish lady, and that the notched ring was retained by some confidential female friend, who was present as a witness at the betrothal ceremony—usually one of the most solemn and private character—and at which, over the Holy Bible, placed before the witness, both the man and the woman broke away the upper and lower rings from the centre one, which was held by the intermediate person. It would appear that the parties were subsequently married; when it was usual, as a proof that their pledge had been fulfilled, to return to the witness or witnesses to their contract the two rings which the betrothed had respectively worn until married, and thus the three rings, which had been separated, became reunited as in the present instance.'

St. Martin's rings, which were fair to the eye, although only brass or copper within, were frequently given as presents to girls by their sweethearts. They are often referred to in old English literature to point a moral; thus in Plaine Percevall, the Peace Maker of England (1589), we read 'I doubt whether all be gold that glisteneth, sith St. Martin's rings be but copper within, though they be gilt without, sayes the goldsmith;' and in Braithwaite's 'Whimzies' (1631), they are mentioned with counterfeit bracelets as 'commodities of infinite consequence.' 'They will pass for current at a may-pole, and purchase a favor from

their Maid Marian.' The name originated from the very extensive franchises and immunities which were enjoyed by the inhabitants of the precincts of the Collegiate Church of St. Martin's-le-Grand. The gilding and silvering of rings made of copper or latten was prohibited by statute 5 Hen. iv. c. 13, under a heavy penalty, and in consequence the 'disloyal artificers,' against whom the enactment was made, appear to have taken refuge in the hallowed district. By another statute (3 Edw. iv. c. 4) it was declared unlawful to import rings of gilded copper or latten, but the Act was not to be prejudicial or hurtful to any persons living in St. Martin's-le-Grand. In the same reign the like reservation of the rights of the dean of St. Martin's and his colony of outlaws was made. And thus it was that St. Martin's rings obtained their name.

The supposed heathen origin of the marriage ring well-nigh caused its abolition during the time of the commonwealth, as Butler tells us in 'Hudibras'—

'Others were for abolishing
That tool of matrimony, a ring
With which the unsanctified bridegroom
Is married only to a thumb.'

Wedding rings, however, have been supposed by some to have been worn by the Jews prior to Christian times, but Selden says that they were only used when the Jews found them prevalent around them. About the commencement of the sixteenth century Hebrew betrothal rings, called *mausselauf* (a word which, freely translated, means *joy be with you*, or *good luck to you*), were common among the German Jews. They were usually surmounted with a small house, temple, or tabernacle, by way of bezel.

Whatever may have been the origin of the wedding ring, the Church took care that it should be considered a holy thing. The 'Doctrine of the Masse Booke' (1554) contains a form for 'the halowing of the woman's ring at wedding,' in which are the following prayers—

'Thou maker and conservor of mankind, gever of spiritual grace and graunter of eternal salvation, Lord send thy blessing upon this ring, that she which shall weare it, maye be armed wyth the vertue of heavenly defence, and that it maye profit her to eternal salvation thorowe Christ,' &c.

'Halow thou Lord this ring which we blesse in thy holye name: that what woman soever shall weare it may stand fast in thy peace, and continue in thy wyl and live and grow and waxe old in thy love,' &c.

Holy water was then to be sprinkled upon the ring.

In the Hereford, York, and Salisbury missals directions are given at the marriage for the ring to be put first on the thumb, after on the second finger, then on the third, and lastly on the fourth finger. The rubric still ordains the fourth finger, because it is the ring finger; and the left hand is chosen, it is said, because the wife is in subjection to her husband, but this is doubtful. It is true that official rings are worn on the right hand, but the left hand has more usually been the favorite one for rings, probably because it is less used than the right.

In many parts of the Continent wedding rings are worn by husbands as well as by wives. The wedding ring worn by Luther, to which we have previously referred, was a gimmel, and consisted of two perfect rings. On one hoop was set a diamond, as the emblem of power, duration, and fidelity, and on the other a ruby, for exalted love. On the mounting of the diamond were engraved Luther's initials, and on that of the ruby his wife's, so that when the two parts were joined the letters came close together. The motto within was 'Was Gott zusammen filget soll kein mensch scheiden' (What God doth join, no man shall part).

Formerly widows wore their ring on the thumb as an emblem of widowhood, and we find the following trick mentioned in the *Spectator*—

'It is common enough for a stale virgin to set up a shop in a place where she is not known, where the large thumb ring supposed to be given her by her husband quickly recommends her to some wealthy neighbor, who takes a liking to the jolly widow that would have overlooked the veritable spinster.'

The old wedding ring usually had its motto, which was often pretty and appropriate. We will set down a few of these posies that were once common—

'Let lyking laste.'
'As God decreed so we agreed.'
'Knit in one by Christ alone.'
'In Christ and thee my comfort be.'
'First love Christ that died for thee,
Next to Him love none but me.'
'Let us share in joy and care.'

'United hearts death only parts.'
'A faithful wife preserveth life.'
'This and the giver are thine forever.'
'This hath alloy, my love is pure.'
'The diamond is within.'
'I like my choice.'
'Love and live happily.'

The wedding ring of St. Louis, of France, was set with a sapphire intaglio of the Crucifixion, and bore on the hoop the motto, 'Dehors cet anel, pourrions avoir amour.' Anne of Cleves' posy was 'God sende me wel to kepe.' Richard Beauchamp, Earl of Warwick, *temp.* Henry VI., had three daughters, who all married noblemen. Margaret's husband was John Talbot, Earl of Shrewsbury, and the motto of her wedding ring, 'Til deithe depart.' Alianour married Edmund, Duke of Somerset, and her motto was 'Never newe.' Elizabeth married Lord Latimer, and hers was 'Til my live's end.' An old Earl of Hertford's wedding ring consisted of five links, the four inner ones containing the following posies of the earl's own making—

'As circles five by art compact shows but one
ring in sight,
So trust united faithful mindes with knott of
secret might;
Whose force to break no right but greedie
Death possesseth power,
As time and sequels well shall prove. My
ringe can say no more.'

Lady Cathcart on marrying her fourth husband, Hugh Maguire, in 1713, had the following posy inscribed on her wedding ring—

'If I survive,
I will have five.'

Dr. John Thomas, Bishop of Lincoln in 1753, married four wives, and being of the same mind with Lady Cathcart he selected a like motto for his fourth wife's ring, viz.—

'If I survive,
I'll make them five.'

The community of fishermen inhabiting the Claddagh at Galway rarely intermarry with other than their own people. The wedding ring is an heirloom in a family, and is regularly transferred from the mother to the daughter who is first married, and so passes to her descendants. Many of those still worn are very old.

The women of the gipsy tribes wear plain massive gold wedding rings, which are occasionally pawned by their possessor when in want of money, but in most cases are scrupulously redeemed. Many superstitions are associated with the wedding ring, and some of them still linger on. It was once a widely-spread belief that a special nerve or artery stretched forth from the heart to the ring finger, and it is not a little remarkable that this notion is derived from Egypt, so that the wedding ring of to-day is placed upon a particular finger because many centuries ago an Egyptian appropriated that as the ring finger, from some supposed virtue that existed in it. Macrobius writes that those Egyptian priests who were prophets when engaged in the temple near the altars of the gods moistened the ring finger of the left hand (which was that next to the smallest) with various sweet ointments, in the belief that a certain nerve communicated with it from the heart.

It has been thought that the wedding ring possesses certain curative powers; thus, it is believed that a sty in the eye will soon disappear after being rubbed with the 'plain gold ring.' Most women are very loath to take off their wedding ring, and it seldom, if ever, is allowed to leave the finger. Its loss is thought to be an evil portent of some importance. In Sir John Bramston's autobiography (1631) it is related that his stepmother dropped her ring off her finger into the sea near the shore when she pulled off her glove. She would not go home without the ring, 'it being the most unfortunate that could befall any one to lose the wedding ring,' and after a general search the seekers were rewarded with success.

Among Moore's juvenile poems will be found a tale called the 'Ring,' which is a version of an old and widely-spread German legend. A young knight who is about to be married to a beautiful girl places the wedding ring on the finger of a statue, thinking it to be a place of safety. When he comes for it the marble finger has turned up, and he is unable to get his ring off. He comes again to break the finger off and release the ring, when he finds the finger open, but the ring gone. He is in dismay, but obtains a new ring, with which he is

married. At night, however, a spectre cold, like the marble statue, comes between the bride and bridegroom. The former cannot see, but the latter sees it, feels it, and hears it speak these words—

'Husband, husband, I've the ring
Thou gav'st to-day to me;
And thou'rt to me for ever wed,
As I am wed to thee!'

At daybreak the spectre departs, but comes again each night, until, with the assistance of an old monk, the knight goes to a place where four roads meet, and obtains his ring again.

Still, in spite of these notions, the gold wedding ring is by no means an indispensable part of the marriage ceremony, for curtain rings, church keys, and rings made from gloves, or leather of any kind have been used as a substitute.

Marrying with a rush ring was practised by designing men to deceive their mistresses, and on account of this abuse the practice is strictly prohibited by the constitutions of Richard, Bishop of Salisbury, in 1217.

'And whilst they sport and dance, the lovesick swains
Compose rush rings and myrtleberry chains.'
—Quarles' 'Shepherd's Oracles,' 1646.

In Greene's 'Menaphon' is the following reference to rush rings: 'Twas a good world when such simplicitie was used, saye the olde women of our time, when a ring of a rush would tye as much love together as a gimmon of gold;' and Douce refers Shakspeare's expression, 'Tib's rush for Tom's forefinger,' to this custom.

There is another ring which is not so well known now, but which was pretty common in the fourteenth and fifteenth centuries. It was a frequent custom in the middle ages for widows to take a vow of chastity or perpetual widowhood, in token of which they received a peculiar robe and ring. Eleanor, third daughter of King John and widow of William Mareschal Earl of Pembroke, made a vow of celibacy to Edmund Archbishop of Canterbury and Richard Bishop of Chichester, after the death of her husband, and received the ring and mantle of profession in public. A few years subsequently she broke her vow and married Simon de Montfort Earl of Leicester, not, however, before the strongest

remonstrances had been made by the pious archbishop. The marriage was generally regarded as null and void, and it was only after the greatest exertions had been made for the Pope's sanction and vast sums of money had been spent that a dispensation was obtained. In the will of Lady Alice West (1395) mention is made of 'a ring with which I was espoused to God.' In 1473 Katherine Rippelingham, 'widow advowes,' bequeaths 'her gold ring with a diamante sette therein wherewith she was *sacrid*.' Mr. Henry Harrod, in a paper in the 'Archæologia' (vol. xl., pp. 307-310), gives numerous instances of money left by will on condition that the testator's wife takes the vow of chastity, or order or profession of widowhood.

Our subject concludes with the last stage of all, and connects itself with death. Mourning rings, as remembrances of those loved ones who have preceded us to the land of spirits, have always been cherished in Christian lands. Lord Eldon wore a mourning ring in memory of his wife, and desired in his will that it might be buried with him.

The practice of offering rings at funerals is introduced as an incident in 'Sir Amadace.' Anne of Cleves, who survived Henry VIII., left by her will several mourning rings of various values to be distributed among her friends and dependents. Dr. Wolcot wrote some elegant lines, very different in tone from the one usually employed by him, on the Princess Amelia's mournful present to her father George III.

'With all the virtues blest and every grace,
To charm the world and dignify her race,
Life's taper losing fast its feeble fire,
The fair Amelia thus bespoke her sire:
"Faint on the bed of sickness lying,
My spirit from its mansion flying,
Not long the light these languid eyes will see,
My friend, my father, and my king,
Receive the token and remember me!"'

Memorial rings were sometimes made to exhibit a small portrait, and, on some occasions, to conceal one beneath a stone. This is the case with the seven rings given away at the burial of Charles I. One of these is in the Londesborough Collection, and is described as follows:—

'Gold, with square table-faced diamond on an oval face, which opens and reveals beneath

a portrait of Charles in enamel. The face of the ring, its back, and side portions of the shank, engraved with scroll work, filled in with black enamel.'

Another of these rings is still more interesting:—

'It was of pure gold, plain, and without jewellery or ornament of any kind; on the top of it was an oval of white enamel, not more than half an inch in longitudinal diameter, and apparently about the eighth of an inch in thickness; the surface was slightly convexed, and divided into four compartments; in each of these was painted one of the four cardinal virtues which, although so minute as to be scarcely perceptible to the clearest sight, by the application of a glass appeared perfectly distinct; each figure was well proportioned, and had its appropriate attribute. By touching a secret spring, the case opened, and exposed to view a very beautifully painted miniature of the unfortunate Charles, with the pointed beard, mustachios, etc., as he is usually portrayed, and from its resemblance to the portraits generally seen of this monarch, wearing every appearance of being a strong likeness.'

The ring sold at Strawberry Hill sale had the king's head in miniature behind a death's head, between the letters C. R. The motto being, 'Prepared be to follow me.' Charles II.'s mourning ring was inscribed 'Car. Rex Remem—obit—ber —30 Jan., 1648.'

Mr. Wright, in 'Miscellanea Graphica' (1857), describes a gold mourning ring 'formed of two skeletons, who support a small sarcophagus. The skeletons are covered with white enamel, and the lid of the sarcophagus is also enamelled, and has a Maltese cross in red on a black ground, studded with gilt hearts, and when removed displays another skeleton.' The Earl of Crawford and Balcarres tells a sad story of a ring in his memoir of Lady Anne Mackenzie. Colin, Earl of Balcarres, when a youth at the court of Charles II., was taken very ill of a fever. Messengers arrived almost hourly to make inquiries after his health on behalf of a lady who had seen him presented at court, viz., Mdle. Mauritia de Nassau, sister of Lady Arlington and Lady Ossory, and a kinswoman of William of Orange. Lord Balcarres paid his respects to the young lady on his recovery, and soon the day for their marriage was fixed. The wedding party was assembled in the church, but no bridegroom appeared. He had forgotten the day, and was found in his dressing gown and slippers

quietly eating his breakfast. On being reminded of his engagement he hurried to the church, but in his haste he left the wedding ring in his *escritoire*. A friend in company gave him a ring; he put his hand behind his back to receive it, and, without looking at it, he placed it on the finger of his bride. It was a mourning ring with a death's head and crossed bones engraved upon it, and the bride, on perceiving it at the close of the ceremony, fainted away. The ill omen made such an impression upon her mind that, on recovering, she declared she should die within a year. Her presentiment was but too truly fulfilled, for she died in childhood in less than a twelvemonth after.

When Diana, of Poitiers, became mistress of Henry II. of France, she was a widow, and the complaisant court not only adopted her mourning as the favorite color, but wore rings engraved with skulls and skeletons. Rings with these devices were not necessarily mourning rings, but were worn by those persons who affected gravity. Luther wore a gold ring with a small death's head in enamel, which is now preserved at Dresden. Biron, in 'Love's Labor Lost,' refers to 'a death's face in a ring,' and in Beaumont and Fletcher we find:—

'I'll keep it
As they keep death's head in rings,
To cry memento to me.'
—'Chances,' Act 1, sc. 3.

We have now passed in review many varieties of rings, and we cannot but notice the little value that is set upon them in the present day, as compared with their importance in days gone by. There are now no official rings, no rings to cure all diseases and save us from all dangers; but, instead of all this, they have sunk into mere ornaments. There is still,

however, one ring that is associated with some of the dearest feelings of our nature, viz., the plain gold ring, as it is called, though why it should be plain we do not know. Why should it not be engraved with all the beauty that art can lavish upon it, and why should not a beautiful posy be written within its hoop! But it is probably useless to suggest such a change in universal fashion, and therefore we cannot do better than bring our subject to a close with the beautiful lines of Herrick:—

'Julia I bring
To thee this ring,
Made for thy finger fit;
To show by this
That our love is,
Or should be like to it.'

'Close tho' it be,
The joint is free;
So when love's yoke is on,
It must not gall,
Or fret at all
With hard oppression.'

'But it must play
Still either way,
And be too such a yoke
As not too wide,
To overslide;
Or be so straight to choke.'

'So we who bear
This beam, must rear
Ourselves to such a height,
As that the stay
Of either may
Create the burthen light.'

'And as this round
Is nowhere found
To flaw, or else to sever;
So let our love
As endless prove,
And pure as gold for ever.'

—*British Quarterly Review*.

INAUGURAL ADDRESS BEFORE THE BRITISH ASSOCIATION.

BY PROF. JOHN TYNDALL, D.C.L., LL.D., F.R.S., PRESIDENT.

AN impulse inherent in primeval man turned his thoughts and questionings betimes toward the sources of natural phenomena. The same impulse, inherited and intensified, is the spur of scientific action to-day. Determined by it, by a process of abstraction from experience

we form physical theories which lie beyond the pale of experience, but which satisfy the desire of the mind to see every natural occurrence resting upon a cause. In forming their notions of the origin of things, our earliest historic (and doubtless, we might add, our prehistoric)

ancestors pursued, as far as their intelligence permitted, the same course. They also fell back upon experience, but with this difference—that the particular experiences which furnished the web and woof of their theories were drawn, not from the study of Nature, but from what lay much closer to them, the observation of men. Their theories accordingly took an anthropomorphic form. To supersensual beings, which, “however potent and invisible, were nothing but a species of human creatures, perhaps raised from among mankind, and retaining all human passions and appetites,”* were handed over the rule and governance of natural phenomena.

Tested by observation and reflection, these early notions failed in the long-run to satisfy the more penetrating intellects of our race. Far in the depths of history we find men of exceptional power differentiating themselves from the crowd, rejecting these anthropomorphic notions, and seeking to connect natural phenomena with their physical principles. But, long prior to these purer efforts of the understanding, the merchant had been abroad, and rendered the philosopher possible: commerce had been developed, wealth amassed, leisure for travel and for speculation secured, while races educated under different conditions, and therefore differently informed and endowed, had been stimulated and sharpened by mutual contact. In those regions where the commercial aristocracy of ancient Greece mingled with its Eastern neighbors, the sciences were born, being nurtured and developed by free-thinking and courageous men. The state of things to be displaced may be gathered from a passage of Euripides quoted by Hume: “There is nothing in the world; no glory, no prosperity. The gods toss all into confusion; mix everything with its reverse, that all of us, from our ignorance and uncertainty, may pay them the more worship and reverence.” Now, as science demands the radical extirpation of caprice and the absolute reliance upon law in Nature, there grew with the growth of scientific notions a desire and determination to sweep from the field of theory this mob of gods and demons, and to place natural phenomena

on a basis more congruent with themselves.

The problem which had been previously approached from above was now attacked from below; theoretic effort passed from the super- to the sub-sensible. It was felt that to construct the universe in idea it was necessary to have some notion of its constituent parts—of what Lucretius subsequently called the “First Beginnings.” Abstracting again from experience, the leaders of scientific speculation reached at length the pregnant doctrine of atoms and molecules, the latest developments of which were set forth with such power and clearness at the last meeting of the British Association. Thought no doubt had long hovered about this doctrine before it attained the precision and completeness which it assumed in the mind of Democritus,* a philosopher who may well for a moment arrest our attention. “Few great men,” says Lange, in his excellent “History of Materialism,” a work to the spirit and the letter of which I am equally indebted, “have been so despitely used by history as Democritus. In the distorted images sent down to us through unscientific traditions there remains of him almost nothing but the name of the ‘laughing philosopher,’ while figures of immeasurably smaller significance spread themselves at full length before us.” Lange speaks of Bacon’s high appreciation of Democritus—for ample illustrations of which I am indebted to my excellent friend Mr. Spedding, the learned editor and biographer of Bacon. It is evident, indeed, that Bacon considered Democritus to be a man of weightier metal than either Plato or Aristotle, though their philosophy “was noised and celebrated in the schools, amid the din and pomp of professors.” It was not they, but Genseric and Attila and the barbarians, who destroyed the atomic philosophy. “For, at a time when all human learning had suffered shipwreck, these planks of Aristotelian and Platonic philosophy, as being of a lighter and more inflated substance, were preserved and came down to us, while things more solid sank and almost passed into oblivion.”

The principles enunciated by Demo-

* Hume, “Natural History of Religion.”

* Born 460 B.C.

critus reveal his uncompromising antagonism to those who deduced the phenomena of Nature from the caprices of the gods. They are briefly these: 1. From nothing comes nothing. Nothing that exists can be destroyed. All changes are due to the combination and separation of molecules. 2. Nothing happens by chance. Every occurrence has its cause from which it follows by necessity. 3. The only existing things are the atoms and empty space; all else is mere opinion. 4. The atoms are infinite in number, and infinitely various in form; they strike together, and the lateral motions and whirlings which thus arise are the beginnings of worlds. 5. The varieties of all things depend upon the varieties of their atoms, in number, size, and aggregation. 6. The soul consists of free, smooth, round atoms, like those of fire. These are the most mobile of all. They interpenetrate the whole body, and in their motions the phenomena of life arise. Thus the atoms of Democritus are individually without sensation; they combine in obedience to mechanical laws; and not only organic forms, but the phenomena of sensation and thought, are also the result of their combination.

That great enigma, "the 'exquisite adaptation of one part of an organism to another part, and to the conditions of life,' more especially the construction of the human body, Democritus made no attempt to solve. Empedocles, a man of more fiery and poetic nature, introduced the notion of love and hate among the atoms to account for their combination and separation. Noticing this gap in the doctrine of Democritus, he struck in with the penetrating thought, linked, however, with some wild speculation, that it lay in the very nature of those combinations which were suited to their ends (in other words, in harmony with their environment) to maintain themselves, while unfit combinations, having no proper habitat, must rapidly disappear. Thus more than two thousand years ago the doctrine of the "survival of the fittest," which in our day, not on the basis of vague conjecture, but of positive knowledge, has been raised to such extraordinary significance, had received at all events partial enunciation.*

Epicurus,* said to be the son of a poor school-master at Samos, is the next dominant figure in the history of the atomic philosophy. He mastered the writings of Democritus, heard lectures in Athens, returned to Samos, and subsequently wandered through various countries. He finally returned to Athens, where he bought a garden, and surrounded himself by pupils, in the midst of whom he lived a pure and serene life, and died a peaceful death. His philosophy was almost identical with that of Democritus; but he never quoted either friend or foe. One main object of Epicurus was to free the world from superstition and the fear of death. Death he treated with indifference. It merely robs us of sensation. As long as we are, death is not; and when death is, we are not. Life has no more evil for him who has made up his mind that it is no evil not to live. He adored the gods, but not in the ordinary fashion. The idea of divine power, properly purified, he thought an elevating one. Still he taught, "Not he is godless who rejects the gods of the crowd, but rather he who accepts them." The gods were to him eternal and immortal beings, whose blessedness excluded every thought of care or occupation of any kind. Nature pursues her course in accordance with everlasting laws, the gods never interfering. They haunt

"The lucid interspace of world and world
Where never creeps a cloud or moves a
wind,
Nor ever falls the least white star of snow,
Nor ever lowest roll of thunder moans,
Nor sound of human sorrow mounts to mar
Their sacred everlasting calm." †

Lange considers the relation of Epicurus to the gods subjective; the indication probably of an ethical requirement of his own nature. We cannot read history with open eyes, or study human nature to its depths, and fail to discern such a requirement. Man never has been, and he never will be satisfied with the operations and products of the understanding alone; hence physical science cannot cover all the demands of his nature. But the history of the efforts made to satisfy these demands might be broadly described as a history of errors

* Lange, 2d edit., p. 23.

* Born 342 B.C. † Tennyson's "Lucretius."

—the error consisting in ascribing fixity to that which is fluent, which varies as we vary, being gross when we are gross, and becoming, as our capacities widen, more abstract and sublime. On one great point the mind of Epicurus was at peace. He neither sought nor expected, here or hereafter, any personal profit from his relation to the gods. And it is assuredly a fact that loftiness and serenity of thought may be promoted by conceptions which involve no idea of profit of this kind. "Did I not believe," said a great man to me once, "that an Intelligence is at the heart of things, my life on earth would be intolerable." The utterer of these words is not, in my opinion, rendered less noble but more noble, by the fact that it was the need of ethical harmony here, and not the thought of personal profit hereafter, that prompted his observation.

A century and a half after the death of Epicurus, Lucretius* wrote his great poem, "On the Nature of Things," in which he, a Roman, developed with extraordinary ardor the philosophy of his Greek predecessor. He wishes to win over his friend Memmius to the school of Epicurus; and although he has no rewards in a future life to offer, although his object appears to be a purely negative one, he addresses his friend with the heat of an apostle. His object, like that of his great forerunner, is the destruction of superstition; and considering that men tremble before every natural event as a direct monition from the gods, and that everlasting torture was also in prospect, the freedom aimed at by Lucretius might perhaps be deemed a positive good. "This terror," he says, "and darkness of mind must be dispelled, not by the rays of the sun and glittering shafts of day, but by the aspect and the law of Nature." He refutes the notion that anything can come out of nothing, or that that which is once begotten can be recalled to nothing. The first beginnings, the atoms, are indestructible, and into them all things can be dissolved at last. Bodies are partly atoms and partly combinations of atoms; but the atoms nothing can quench. They are strong in solid singleness, and by their denser combination all things can be closely

packed and exhibit enduring strength. He denies that matter is infinitely divisible. We come at length to the atoms, without which, as an imperishable substratum, all order in the generation and development of things would be destroyed.

The mechanical shock of the atoms being in his view the all-sufficient cause of things, he combats the notion that the constitution of Nature has been in any way determined by intelligent design. The interaction of the atoms throughout infinite time rendered all manner of combinations possible. Of these the fit ones persisted, while the unfit ones disappeared. Not after sage deliberation did the atoms station themselves in their right places, nor did they bargain what motions they should assume. From all eternity they have been driven together, and, after trying motions and unions of every kind, they fell at length into the arrangements out of which this system of things has been formed. His grand conception of the atoms falling silently through immeasurable ranges of space and time suggested the nebular hypothesis to Kant, its first propounder. "If you will apprehend and keep in mind these things, Nature, free at once, and rid of her haughty lords, is seen to do all things spontaneously of herself, without the meddling of the gods."*

During the centuries between the first of these three philosophers and the last, the human intellect was active in other fields than theirs. The Sophists had run through their career. At Athens had appeared the three men, Socrates, Plato, and Aristotle, whose yoke remains to some extent unbroken to the present hour. Within this period, also, the School of Alexandria was founded, Euclid wrote his "Elements," and he and others made some advance in optics. Archimedes had propounded the theory of the lever and the principles of hydrostatics. Pythagoras had made his experiments on the harmonic intervals, while astronomy was immensely enriched by the discoveries of Hipparchus, who was

* Monro's translation. In his criticism of this work (*Contemporary Review*, 1867) Dr. Hayman does not appear to be aware of the really sound and subtle observations on which the reasoning of Lucretius, though erroneous, sometimes rests.

* Born 99 B.C.

followed by the historically more celebrated Ptolemy. Anatomy had been made the basis of scientific medicine; and it is said by Draper* that vivisection then began. In fact, the science of ancient Greece had already cleared the world of the fantastic images of divinities operating capriciously through natural phenomena. It had shaken itself free from that fruitless scrutiny "by the internal light of the mind alone," which had vainly sought to transcend experience and reach a knowledge of ultimate causes. Instead of accidental observation it had introduced observation with a purpose; instruments were employed to aid the senses; and scientific method was rendered in a great measure complete by the union of induction and experiment.

What, then, stopped its victorious advance? Why was the scientific intellect compelled, like an exhausted soil, to lie fallow for nearly two millenniums before it could regather the elements necessary to its fertility and strength? Bacon has already let us know one cause; Whewell ascribes this stationary period [to four causes—obscurity of thought, servility, intolerance of disposition, enthusiasm of temper; and he gives striking examples of each.† But these characteristics must have had their causes, which lay in the circumstances of the time. Rome and the other cities of the empire had fallen into moral putrefaction. Christianity had appeared, offering the Gospel to the poor, and by moderation if not asceticism of life, practically protesting against the profligacy of the age. The sufferings of the early Christians and the extraordinary exaltation of mind which enabled them to triumph over the diabolical tortures to which they were subjected,‡ must have left traces not easily effaced. They scorned the earth, in view of that "building of God, that house not made with hands, eternal in the heavens." The Scriptures which ministered to their spiritual needs were also the measure of their science. When, for example, the celebrated question of antipodes came to be discussed, the Bible was with many

the ultimate court of appeal. Augustine, who flourished A.D. 400, would not deny the rotundity of the earth, but he would deny the possible existence of inhabitants at the other side, "because no such race is recorded in Scripture among the descendants of Adam." Archbishop Boniface was shocked at the assumption of a "world of human beings out of the reach of the means of salvation." Thus reined in, science was not likely to make much progress. Later on, the political and theological strife between the Church and civil governments, so powerfully depicted by Draper, must have done much to stifle investigation.

Whewell makes many wise and brave remarks regarding the spirit of the middle ages. It was a menial spirit. The seekers after natural knowledge had forsaken that fountain of living waters, the direct appeal to Nature by observation and experiment, and had given themselves up to the remanipulation of the notions of their predecessors. It was a time when thought had become abject, and when the acceptance of mere authority led, as it always does in science, to intellectual death. Natural events, instead of being traced to physical, were referred to moral causes, while an exercise of the fantasy, almost as degrading as the spiritualism of the present day, took the place of scientific speculation. Then came the mysticism of the middle ages, magic, alchemy, the Neo-platonic philosophy, with its visionary though sublime attractions, which caused men to look with shame upon their own bodies as hindrances to the absorption of the creature in the blessedness of the Creator. Finally came the scholastic philosophy, a fusion, according to Lange, of the least mature notions of Aristotle with the Christianity of the West. Intellectual immobility was the result. As a traveller without a compass in a fog may wander long, imagining he is making way, and find himself, after hours of toil, at his starting-point, so the schoolmen, having tied and untied the same knots, and formed and dissipated the same clouds, found themselves at the end of centuries in their old position.

With regard to the influence wielded by Aristotle in the middle ages, and which, though to a less extent, he still wielded, I would ask permission to make

* "History of the Intellectual Development of Europe," p. 295.

† "History of the Inductive Sciences," vol. i.

‡ Depicted with terrible vividness in Renan's "Antichrist."

one remark. When the human mind has achieved greatness and given evidence of extraordinary power in any domain, there is a tendency to credit it with similar power in all other domains. Thus theologians have found comfort and assurance in the thought that Newton dealt with the question of revelation, forgetful of the fact that the very devotion of his powers, through all the best years of his life, to a totally different class of ideas, not to speak of any natural disqualification, tended to render him less instead of more competent to deal with theological and historic questions. Goethe, starting from his established greatness as a poet, and indeed from his positive discoveries in natural history, produced a profound impression among the painters of Germany when he published his "Farbenlehre," in which he endeavored to overthrow Newton's theory of colors. This theory he deemed so obviously absurd, that he considered its author a charlatan, and attacked him with a corresponding vehemence of language. In the domain of natural history Goethe had made really considerable discoveries; and we have high authority for assuming that, had he devoted himself wholly to that side of science, he might have reached in it an eminence comparable with that which he attained as a poet. In sharpness of observation, in the detection of analogies, however apparently remote, in the classification and organization of facts according to the analogies discerned, Goethe possessed extraordinary powers. These elements of scientific inquiry fall in with the discipline of the poet. But, on the other hand, a mind thus richly endowed in the direction of natural history may be almost shorn of endowment as regards the more strictly called physical and mechanical sciences. Goethe was in this condition. He could not formulate distinct mechanical conceptions; he could not see the force of mechanical reasoning; and in regions where such reasoning reigns supreme he became a mere *ignis fatuus* to those who followed him.

I have sometimes permitted myself to compare Aristotle with Goethe, to credit the Stagirite with an almost superhuman power of amassing and systematizing facts, but to consider him fatally defective on that side of the mind in respect

to which incompleteness has been justly ascribed to Goethe. Whewell refers the errors of Aristotle, not to a neglect of facts, but to "a neglect of the idea appropriate to the facts; the idea of mechanical cause, which is force, and the substitution of vague or inapplicable notions, involving only relations of space or emotions of wonder." This is doubtless true; but the word "neglect" implies mere intellectual misdirection, whereas in Aristotle, as in Goethe, it was not, I believe, misdirection, but sheer natural incapacity which lay at the root of his mistakes. As a physicist, Aristotle displayed what we should consider some of the worst attributes of a modern physical investigator—indistinctness of ideas, confusion of mind, and a confident use of language, which led to the delusive notion that he had really mastered his subject; while he as yet had failed to grasp even the elements of it. He put words in the place of things, subject in the place of object. He preached induction without practising it, inverting the true order of inquiry by passing from the general to the particular, instead of from the particular to the general. He made of the universe a closed sphere, in the centre of which he fixed the earth, proving from general principles, to his own satisfaction and that of the world for nearly 2000 years, that no other universe was possible. His notions of motion were entirely unphysical. It was natural or unnatural, better or worse, calm or violent—no real mechanical conception regarding it lying at the bottom of his mind. He affirmed that a vacuum could not exist, and proved that if it did exist motion in it would be impossible. He determined *a priori* how many species of animals must exist, and showed on general principles why animals must have such and such parts. When an eminent contemporary philosopher, who is far removed from errors of this kind, remembers these abuses of the *a priori* method, he will be able to make allowance for the jealousy of physicists as to the acceptance of so-called *a priori* truths. Aristotle's errors of detail were grave and numerous. He affirmed that only in man we had the beating of the heart, that the left side of the body was colder than the right, that men have more teeth than women, and that there

is an empty space, not at the front," but at the back of every man's head.

There is one essential quality in physical conceptions which was entirely wanting in those of Aristotle and his followers. I wish it could be expressed by a word untainted by its associations; it signifies a capability of being placed as a coherent picture before the mind. The Germans express the act of picturing by the word *vorstellen*, and the picture they call a *Vorstellung*. We have no word in English which comes nearer to our requirements than *imagination*, and, taken with its proper limitations, the word answers very well; but, as just intimated, it is tainted by its associations, and therefore objectionable to some minds. Compare, with reference to this capacity of mental presentation, the case of the Aristotelian, who refers the ascent of water in a pump to Nature's abhorrence of a vacuum, with that of Pascal when he proposed to solve the question of atmospheric pressure by the ascent of the Puy de Dôme. In the one case the terms of the explanation refuse to fall into place as a physical image; in the other the image is distinct, the fall and rise of the barometer being clearly figured as the balancing of two varying and opposing pressures.

During the drought of the middle ages in Christendom, the Arabian intellect, as forcibly shown by Draper, was active. With the intrusion of the Moors into Spain, cleanliness, order, learning, and refinement, took the place of their opposites. When smitten with the disease, the Christian peasant resorted to a shrine; the Moorish one to an instructed physican. The Arabs encouraged translations from the Greek philosophers, but not from the Greek poets. They turned in disgust "from the lewdness of our classical mythology, and denounced as an unpardonable blasphemy all connection between the impure Olympian Jove and the Most High God." Draper traces still further than Whewell the Arab elements in our scientific terms, and points out that the under-garment of ladies retains to this hour its Arab name. He gives examples of what Arabian men of science accomplished, dwelling particularly on Alhazen, who was the first to correct the Platonic notion that rays of light are emitted by the eye. He disco-

vered atmospheric refraction, and points out that we see the sun and moon after they have set. He explains the enlargement of the sun and moon, and the shortening of the vertical diameters of both these bodies, when near the horizon. He is aware that the atmosphere decreases in density with increase of height, and actually fixes its height at 58½ miles. In the "Book of the Balance Wisdom," he sets forth the connection between the weight of the atmosphere and its increasing density. He shows that a body will weigh differently in a rare and a dense atmosphere. He considers the force with which plunged bodies rise through heavier media. He understands the doctrine of the centre of gravity, and applies it to the investigation of balances and steelyards. He recognizes gravity as a force, though he falls into the error of making it diminish at the distance, and of making it purely terrestrial. He knows the relation between the velocities, spaces, and times of falling bodies, and has distinct ideas of capillary attraction. He improves the hydrometer. The determination of the densities of the bodies, as given by Alhazen, approaches very closely to our own. "I join," says Draper, "in the pious prayer of Alhazen, 'that in the day of judgment the All-Merciful will take pity on the soul of Abur-Raihan, because he was the first of the race of men to construct a table of specific gravities.'" If all this be historic truth (and I have entire confidence in Dr. Draper), well may he "deprecate the systematic manner in which the literature of Europe has contrived to put out of sight our scientific obligations to the Mohammedans."*

Toward the close of the stationary period, a word-weariness, if I may so express it, took more and more possession of men's minds. Christendom had become sick of the school philosophy and its verbal wastes, which led to no issue but left the intellect in everlasting haze. Here and there was heard the voice of one impatiently crying in the wilderness, "Not unto Aristotle, not unto subtle hypotheses, not unto Church, Bible, or blind tradition, must we turn for a knowledge of the universe,

* "Intellectual Development of Europe," p. 359.

but to the direct investigation of Nature by observation and experiment." In 1543 the epoch-making work of Copernicus on the paths of the heavenly bodies appeared. The total crash of Aristotle's closed universe with the earth at its centre followed as a consequence; and "the earth moves" became a kind of watchword among intellectual freemen. Copernicus was the Canon of the Church of Frauenburg, in the diocese of Ermeland. For three-and-thirty years he had withdrawn himself from the world, and devoted himself to the consolidation of his great scheme of the solar system. He made its blocks eternal; and even to those who feared it, and desired its overthrow, it was so obviously strong that they refrained from meddling with it. In the last year of the life of Copernicus his book appeared. It is said that the old man received a copy of it a few days before his death, and then departed in peace.

The Italian philosopher Giordano Bruno was one of the earliest converts to the new astronomy. Taking Lucretius as his exemplar, he revived the notion of the infinity of worlds; and, combining with it the doctrine of Copernicus, reached the sublime generalization that the fixed stars are suns, scattered numberless through space and accompanied by satellites, which bear the same relation to them as the earth does to our sun, or our moon to our earth. This was an expansion of transcendent import; but Bruno came closer than this to our present line of thought. Struck with the problem of the generation and maintenance of organisms, and duly pondering it, he came to the conclusion that Nature in her productions does not imitate the technic of man. Her process is one of unraveling and unfolding. The infinity of forms under which matter appears was not imposed upon it by an external artificer; by its own intrinsic force and virtue it brings these forms forth. Matter is not the mere naked, empty *capacity* which philosophers have pictured her to be, but the universal mother, who brings forth all things as the fruit of her own womb.

This outspoken man was originally a Dominican monk. He was accused of heresy and had to fly, seeking refuge in Geneva, Paris, England, and Germany.

In 1592 he fell into the hands of the Inquisition at Venice. He was imprisoned for many years, tried, degraded, excommunicated, and handed over to the civil power, with the request that he should be treated gently and "without the shedding of blood." This meant that he was to be burnt; and burnt accordingly he was, on February 16, 1600. To escape a similar fate, Galileo, thirty-three years afterwards, abjured, upon his knees and with his hand on the holy gospels, the heliocentric doctrine. After Galileo came Kepler, who from his German home defied the power beyond the Alps. He traced out from pre-existing observations the laws of planetary motion. The problem was thus prepared for Newton, who bound those empirical laws together by the principle of gravitation.

During the middle ages the doctrine of atoms had to all appearance vanished from discussion. In all probability it held its ground among sober-minded and thoughtful men, though neither the Church nor the world was prepared to hear of it with tolerance. Once, in the year 1348, it received distinct expression. But retraction by compulsion immediately followed, and, thus discouraged, it slumbered till the seventeenth century, when it was revived by a contemporary of Hobbes and Descartes, the Père Gassendi.

The analytic and synthetic tendencies of the human mind exhibit themselves throughout history, great writers ranging themselves sometimes on the one side, sometimes on the other. Men of lofty feelings, and minds open to the elevating impressions produced by Nature as a whole, whose satisfaction, therefore, is rather ethical than logical, have leaned to the synthetic side; while the analytic harmonizes best with the more precise and more mechanical bias which seeks the satisfaction of the understanding. Some form of pantheism was usually adopted by the one, while a detached Creator, working more or less after the manner of men, was often assumed by the other.*

* Boyle's model of the universe was the Strasbourg clock with an outside artificer, Goethe, on the other hand, sang:

"Ihm ziemt's die Welt im Innern zu bewegen,
Natur in sich, sich in Natur zu hegen."

The same repugnance to the clockmaker conception is manifest in Carlyle.

Gassendi is hardly to be ranked with either. Having formally acknowledged God as the first great cause, he immediately drops the idea, applies the known laws of mechanics to the atoms, and thence deduces all vital phenomena. God, who created earth and water, planets and animals, produced in the first place a definite number of atoms, which constituted the seed of all things. Then began that series of combinations and decompositions which goes on at the present day, and which will continue in the future. The principle of every change resides in matter. In artificial productions the moving principle is different from the material worked upon; but in Nature the agent works within, being the most active and mobile part of the material itself. Thus this bold ecclesiastic, without incurring the censure of the Church or the world, contrives to outstrip Mr. Darwin. The same cast of mind which caused him to detach the Creator from his universe led him also to detach the soul from the body, though to the body he ascribes an influence so large as to render the soul almost unnecessary. The aberrations of reason were in his view an affair of the material brain: Mental disease is brain-disease; but then the immortal reason sits apart, and cannot be touched by the disease. The errors of madness are errors of the instrument, not of the performer.

It may be more than a mere result of education, connecting itself probably with the deeper mental structure of the two men, that the idea of Gassendi, above enunciated, is substantially the same as that expressed by Prof. Clerk Maxwell at the close of the very noble lecture delivered by him at Bradford last year. According to both philosophers, the atoms, if I understand aright, are the *prepared materials*, the "manufactured articles," which, formed by the skill of the Highest, produce by their subsequent interaction all the phenomena of the material world. There seems to be this difference, however, between Gassendi and Maxwell: the one *postulates*, the other *infers* his first cause. In his manufactured articles, Prof. Maxwell finds the basis of an induction which enables him to scale philosophic heights considered inaccessible by Kant, and to take

the logical step from the atoms to their Maker.

The atomic doctrine, in whole or in part, was entertained by Bacon, Descartes, Hobbes, Locke, Newton, Boyle, and their successors, until the chemical law of multiple proportions enabled Dalton to confer upon it an entirely new significance. In our day there are secessions from the theory, but it still stands firm. Only a year or two ago Sir William Thomson, with characteristic penetration, sought to determine the sizes of the atoms, or rather to fix the limits between which their sizes lie; while only last year the discourses of Williamson and Maxwell illustrate the present hold of the doctrine upon the foremost scientific minds. What these atoms, self-moved, and self-positing, can and cannot accomplish in relation to life, is at the present moment the subject of profound scientific thought. I doubt the legitimacy of Maxwell's logic; but it is impossible not to feel the ethic glow with which his lecture concludes. There is, moreover, a Lucretian grandeur in his description of the steadfastness of the atoms: "Natural causes, as we know, are at work, which tend to modify, if they do not at length destroy, all the arrangements and dimensions of the earth and the whole solar system. But though in the course of ages catastrophes have occurred and may yet occur in the heavens, though ancient systems may be dissolved and new systems evolved out of their ruins, the molecules out of which these systems are built, the foundation-stones of the material universe, remain unbroken and unworn."

Ninety years subsequent to Gassendi the doctrine of bodily instruments, as it may be called, assumed immense importance in the hands of Bishop Butler, who, in his famous "Analogy of Religion," developed, from his own point of view, and with consummate sagacity, a similar idea. The Bishop still influences superior minds; and it will repay us to dwell for a moment on his views. He draws the sharpest distinction between our real selves and our bodily instruments. He does not, as far as I remember, use the word soul, possibly because the term was so hackneyed in his day, as it had been for many generations pre-

viously. But he speaks of "living powers," "perceiving" or "percipient powers," "moving agents," "ourselves," in the same sense as we should employ the term soul. He dwells upon the fact that limbs may be removed and mortal diseases assail the body, while the mind, almost up to the moment of death, remains clear. He refers to sleep and to swoon, where the "living powers" are suspended but not destroyed. He considers it quite as easy to conceive of an existence out of our bodies as in them; that we may animate a succession of bodies, the dissolution of all of them having no more tendency to dissolve our real selves, or "deprive us of living faculties—the faculties of perception and action—than the dissolution of any foreign matter which we are capable of receiving impressions from, or making use of, for the common occasions of life." This is the key of the bishop's position: "Our organized bodies are no more a part of ourselves than any other matter around us." In proof of this he calls attention to the use of glasses, which "prepare objects" for the "percipient power" exactly as the eye does. The eye itself is no more percipient than the glass, and is quite as much the instrument of the true self, and also as foreign to the true self, as the glass is. "And if we see with our eyes only in the same manner as we do with glasses, the like may justly be concluded from analogy of all our senses."

Lucretius, as you are aware, reached a precisely opposite conclusion; and it certainly would be interesting, if not profitable, to us all, to hear what he would or could urge in opposition to the reasoning of the bishop. As a brief discussion of the point will enable us to see the bearings of an important question, I will here permit a disciple of Lucretius to try the strength of the bishop's position, and then allow the bishop to retaliate, with the view of rolling back, if he can, the difficulty upon Lucretius. Each shall state his case fully and frankly, and you shall be umpire between them. The argument might proceed in this fashion:

"Subjected to the test of mental presentation (*Vorstellung*) your views, most honored prelate, would present to many minds a great, if not an insuperable difficulty. You speak of 'living powers,' 'percipient or perceiving powers,' and

'ourselves;' but can you form a mental picture of any one of these apart from the organism through which it is supposed to act? Test yourself honestly, and see whether you possess any faculty that would enable you to form such a conception. The true self has a local habitation in each of us; thus localized, must it not possess a form? If so, what form? Have you ever for a moment realized it? When a leg is amputated, the body is divided into two parts; is the true self in both of them or in one? Thomas Aquinas might say in both; but not you, for you appeal to the consciousness associated with one of the two parts to prove that the other is foreign matter. Is consciousness, then, a necessary element of the true self? If so, what do you say to the case of the whole body being deprived of consciousness? If not, then on what grounds do you deny any portion of the true self to the severed limb? It seems very singular that, from the beginning to the end of your admirable book (and no one admires its sober strength more than I do), you never once mention the brain or nervous system. You begin at one end of the body, and show that its parts may be removed without prejudice to the perceiving power. What if you begin at the other end, and remove, instead of the leg, the brain? The body, as before, is divided into two parts; but both are now in the same predicament, and neither can be appealed to to prove that the other is foreign matter. Or, instead of going so far as to remove the brain itself, let a certain portion of its bony covering be removed, and let a rhythmic series of pressure and relaxations of pressure be applied to the soft substance. At every pressure 'the faculties of perception and of action' vanish; at every relaxation of pressure they are restored. Where, during the intervals of pressure, is the perceiving power? I once had the discharge of a Leyden battery passed unexpectedly through me: I felt nothing, but was simply blotted out of conscious existence for a sensible interval. Where was my true self during that interval? Men who have recovered from lightning-stroke have been much longer in the same state; and, indeed, in cases of ordinary concussion of the brain, days may elapse during which no experience is registered in consciousness. Where is the man

himself during the period of insensibility? You may say that I beg the question when I assume the man to have been unconscious, that he was really conscious all the time, and has simply forgotten what had occurred to him. In reply to this, I can only say that no one need shrink from the worst tortures that superstition ever invented if only so felt and so remembered. I do not think your theory of instruments goes at all to the bottom of the matter. A telegraph operator has his instruments, by means of which he converses with the world; our bodies possess a nervous system, which plays a similar part between the perceiving powers and external things. Cut the wires of the operator, break his battery, demagnetize his needle; by this means you certainly sever his connection with the world; but, inasmuch as these are real instruments, their destruction does not touch the man who uses them. The operator survives, and he knows that he survives. What is it, I would ask, in the human system that answers to this conscious survival of the operator when the battery of the brain is so disturbed as to produce insensibility, or when it is destroyed altogether?

"Another consideration, which you may consider slight, presses upon me with some force. The brain may change from health to disease, and through such a change the most exemplary man may be converted into a debauchee or a murderer. My very noble and approved good master had, as you know, threatenings of lewdness introduced into his brain by his jealous wife's philter; and, sooner than permit himself to run even the risk of yielding to these base promptings, he slew himself. How could the hand of Lucretius have been thus turned against himself if the real Lucretius remained as before? Can the brain or can it not act in this distempered way without the intervention of the immortal reason? If it can, then it is a prime mover which requires only healthy regulation to render it reasonably self-acting, and there is no apparent need of your immortal reason at all. If it cannot, then the immortal reason, by its mischievous activity in operating upon a broken instrument, must have the credit of committing every imaginable extravagance and crime. I think, if you will allow me to say so, that

the gravest consequences are likely to flow from your estimate of the body. To regard the brain as you would a staff or an eyeglass—to shut your eyes to all its mystery, to the perfect correlation that reigns between its condition and our consciousness, to the fact that a slight excess or defect of blood in it produces that very swoon to which you refer, and that in relation to it our meat and drink and air and exercise have a perfectly transcendental value and significance—to forget all this does, I think, open a way to innumerable errors in our habits of life, and may possibly in some cases initiate and foster that very disease, and consequent mental ruin, which a wiser appreciation of this mysterious organ would have avoided."

I can imagine the bishop thoughtful after hearing this argument. He was not the man to allow anger to mingle with the consideration of a point of this kind. After due consideration, and having strengthened himself by that honest contemplation of the facts which was habitual with him, and which includes the desire to give even adverse facts their due weight, I can suppose the bishop to proceed thus: "You will remember that in the 'Analogy of Religion,' of which you have so kindly spoken, I did not profess to prove anything absolutely, and that I over and over again acknowledged and insisted on the smallness of our knowledge, or rather the depth of our ignorance, as regards the whole system of the universe. My object was to show my deistical friends who set forth so eloquently the beauty and beneficence of Nature and the Ruler thereof, while they had nothing but scorn for the so-called absurdities of the Christian scheme, that they were in no better condition than we were, and that for every difficulty they found upon our side, quite as great a difficulty was to be found on theirs. I will now, with your permission, adopt a similar line of argument. You are a Lucretian, and from the combination and separation of atoms deduce all terrestrial things, including organic forms and their phenomena. Let me tell you in the first instance how far I am prepared to go with you. I admit that you can build crystalline forms out of this play of molecular force; that the diamond, amethyst, and snow-star, are truly wonderful

structures which are thus produced. I will go further and acknowledge that even a tree or flower might in this way be organized. Nay, if you can show me an animal without sensation, I will concede to you that it also might be put together by the suitable play of molecular force.

"Thus far our way is clear, but now comes my difficulty. Your atoms are individually without sensation, much more are they without intelligence. May I ask you, then, to try your hand upon this problem? Take your dead hydrogen-atoms, your dead oxygen-atoms, your dead carbon-atoms, your dead nitrogen-atoms, your dead phosphorus-atoms, and all the other atoms, dead as grains of shot, of which the brain is formed. Imagine them separate and sensationless; observe them running together and forming all imaginable combinations. This, as a purely mechanical process, is *seeable* by the mind. But can you see, or dream, or in any way imagine, how out of that mechanical act, and from these individually dead atoms, sensation, thought, and emotion, are to arise? You speak of the difficulty of presentation in my case; is it less in yours? I am not all bereft of this *Vorstellungskraft* of which you speak. I can follow a particle of musk until it reaches the olfactory nerve; I can follow the waves of sound until their tremors reach the water of the labyrinth, and set the otoliths and Corti's fibres in motion; I can also visualize the waves of ether as they cross the eye and hit the retina. Nay, more, I am able to follow up to the central organ the motion thus imparted at the periphery, and to see in idea the very molecules of the brain thrown into tremors. My insight is not baffled by these physical processes. What baffles me, what I find unimaginable, transcending every faculty I possess—transcending, I humbly submit, every faculty *you* possess—is the notion that out of those physical tremors you can extract things so utterly incongruous with them as sensation, thought, and emotion. You may say, or think, that this issue of consciousness from the clash of atoms is not more incongruous than the flash of light from the union of oxygen and hydrogen. But I beg to say that it is. For such incongruity as the flash possesses is that which I now force upon your attention.

The flash is an affair of consciousness, the objective counterpart of which is a vibration. It is a flash only by our interpretation. *You* are the cause of the apparent incongruity; and *you* are the thing that puzzles me. I need not remind you that the great Leibnitz felt the difficulty which I feel, and that to get rid of this monstrous deduction of life from death he displaced your atoms by his monads, and which were more or less perfect mirrors of the universe, and out of the summation and integration of which he supposed all the phenomena of life—sentient, intellectual, and emotional—to arise.

"Your difficulty, then, as I see you are ready to admit, is quite as great as mine. You cannot satisfy the human understanding in its demand for logical continuity between molecular processes and the phenomena of consciousness. This is a rock on which materialism must inevitably split whenever it pretends to be a complete philosophy of life. What is the moral, my Lucretian? You and I are not likely to indulge in ill-temper in the discussion of these great topics, where we see so much room for honest differences of opinion. But there are people of less wit, or more bigotry (I say it with humility), on both sides, who are ever ready to mingle anger and vituperation with such discussions. There are, for example, writers of note and influence at the present day who are not ashamed to assume the 'deep personal sin' of a great logician to be the cause of his unbelief in a theologic dogma. And there are others who hold that we, who cherish our noble Bible, wrought as it has been into the constitution of our forefathers, and by inheritance into us, must necessarily be hypocritical and insincere. Let us disavow and discountenance such people, cherishing the unswerving faith that what is good and true in both our arguments will be preserved for the benefit of humanity, while all that is bad or false will disappear."

It is worth remarking that in one respect the bishop was a product of his age. Long previous to his day the nature of the soul had been so favorite and general a topic of discussion that, when the students of the University of Paris wished to know the leanings of a new professor, they at once requested him to lecture

upon the soul. About the time of Bishop Butler the question was not only agitated but extended. It was seen by the clear-witted men who entered this arena that many of their best arguments applied equally to brutes and men. The bishop's arguments were of this character. He saw it, admitted it, accepted the consequences, and boldly embraced the whole animal world in his scheme of immortality.

Bishop Butler accepted with unwavering trust the chronology of the Old Testament, describing it as "confirmed by the natural and civil history of the world, collected from common historians, from the state of the earth, and from the late inventions of arts and sciences." These words mark progress; they must seem somewhat hoary to the Bishop's successors of to-day.* It is hardly necessary to inform you that, since his time, the domain of the naturalist has been immensely extended—the whole science of geology, with its astounding revelations regarding the life of the ancient earth, having been created. The rigidity of old conceptions has been relaxed, the public mind being rendered gradually tolerant of the idea that not for six thousand, nor for sixty thousand, nor for six thousand thousand, but for æons embracing untold millions of years, this earth has been the theatre of life and death. The riddle of the rocks has been read by the geologist and paleontologist, from sub-Cambrian depths to the deposits thickening over the sea-bottoms of to-day. And upon the leaves of that stone-book are, as you know, stamped the characters, plainer and surer than those formed by the ink of history, which carry the mind back into abysses of past time, compared with which the periods which satisfied Bishop Butler cease to have a visual angle. Everybody now knows this; all men admit it; still, when they were first broached, these verities of science found loud-tongued denunciators, who proclaimed not only their baselessness considered scientifically, but their immorality considered as questions of ethics and religion:

the Book of Genesis had stated the question in a different fashion, and science must necessarily go to pieces when it clashed with this authority. And as the seed of the thistle produces a thistle, and nothing else, so these objectors scatter their germs abroad, and reproduce their kind, ready to play again the part of their intellectual progenitors, to show the same virulence, the same ignorance, to achieve for a time the same success, and finally to suffer the same inexorable defeat. Sure the time must come at last when human nature in its entirety, whose legitimate demands it is admitted science alone cannot satisfy, will find interpreters and expositors of a different stamp from those rash and ill-informed persons who have been hitherto so ready to hurl themselves against every new scientific revelation, lest it should endanger what they are pleased to consider theirs.

The lode of discovery once struck, those petrified forms in which life was at one time active increased to multitudes and demanded classification. The general fact soon became evident that none but the simplest forms of life lie lowest down—that as we climb higher and higher among the superimposed strata more perfect forms appear. The change, however, from form to form was not continuous, but by steps, some small, some great. "A section," says Mr. Huxley, "a hundred feet thick will exhibit at different heights a dozen species of ammonite, none of which passes beyond its particular zone of limestone, or clay, into the zone below it, or into that above it." In the presence of such facts it was not possible to avoid the question, Have these forms, showing, though in broken stages and with many irregularities, this unmistakable general advance, been subjected to no continuous law of growth or variation? Had our education been purely scientific, or had it been sufficiently detached from influences which, however ennobling in another domain, have always proved hindrances and delusions when introduced as factors into the domain of physics, the scientific mind never could have swerved from the search for a law of growth, or allowed itself to accept the anthropomorphism which regarded each successive stratum as a kind of mechanic's bench for the

* Only to some; for there are dignitaries who even now speak of the earth's rocky crust as so much building-material prepared for man at the Creation. Surely it is time that this loose language should cease.

manufacture of new species out of all relation to the old.

Biased, however, by their previous education, the great majority of naturalists invoked a special creative act to account for the appearance of each new group of organisms. Doubtless there were numbers who were clear-headed enough to see that this was no explanation at all; that, in point of fact, it was an attempt, by the introduction of a greater difficulty, to account for a less. But, having nothing to offer in the way of explanation, they for the most part held their peace. Still the thoughts of reflecting men naturally and necessarily simmered round the question. De Maillet, a contemporary of Newton, has been brought into notice by Prof. Huxley as one who "had a notion of the modifiability of living forms." In my frequent conversations with him, the late Sir Benjamin Brodie, a man of highly-philosophic mind, often drew my attention to the fact that, as early as 1794, Charles Darwin's grandfather was the pioneer of Charles Darwin. In 1801, and in subsequent years, the celebrated Lamarck, who produced so profound an impression on the public mind through the vigorous exposition of his views by the author of "Vestiges of Creation," endeavored to show the development of species out of changes of habit and external condition. In 1813, Dr. Wells, the founder of our present theory of dew, read before the Royal Society a paper in which, to use the words of Mr. Darwin, "he distinctly recognizes the principle of natural selection; and this is the first recognition that has been indicated." The thoroughness and skill with which Wells pursued his work, and the obvious independence of his character, rendered him long ago a favorite with me; and it gave me the liveliest pleasure to alight upon this additional testimony to his penetration. Prof. Grant, Mr. Patrick Matthew, Von Buch, the author of the "Vestiges," D'Hallo, and others,* by the enunciation of views more or less clear and correct, showed

that the question had been fermenting long prior to the year 1858, when Mr. Darwin and Mr. Wallace simultaneously, but independently, placed their closely concurrent views upon the subject before the Linnean Society.

These papers were followed in 1859 by the publication of the first edition of "The Origin of Species." All great things come slowly to the birth. Copernicus, as I informed you, pondered his great work for thirty-three years. Newton for nearly twenty years kept the idea of Gravitation before his mind; for twenty years also he dwelt upon his discovery of Fluxions, and doubtless would have continued to make it the object of his private thought had he not found that Leibnitz was upon his track. Darwin for two-and-twenty years pondered the problem of the origin of species, and doubtless he would have continued to do so had he not found Wallace upon his track.* A concentrated but full and powerful epitome of his labors was the consequence. The book was by no means an easy one; and probably not one in every score of those who then attacked it had read its pages through, or was competent to grasp their significance if they had. I do not say this merely to discredit them, for there were in those days some really eminent scientific men, entirely raised above the heat of popular prejudice, willing to accept any conclusion that science had to offer, provided it was duly backed by fact and argument, and who entirely mistook Mr. Darwin's views. In fact, the work needed an expounder, and it found one in Mr. Huxley. I know nothing more admirable in the way of scientific exposition than those early articles of his on the origin of species. He swept the curve of discussion through the really significant points of the subject, enriched his exposition with profound original remarks and reflections, often summing up in a single pithy sentence an argument which a less compact mind would have spread over pages. But there is one impression made by the book itself which no exposition of it, however luminous, can convey, and that is the impression of

* In 1855, Mr. Herbert Spencer ("Principles of Psychology," second edition, vol. i., p. 465) expressed "the belief that life under all its forms has arisen by an unbroken evolution, and through the instrumentality of what are called natural causes."

* The behavior of Mr. Wallace in relation to this subject has been dignified in the highest degree.

the vast amount of labor, both of observation and of thought, implied in its production. Let us glance at its principles.

It is conceded on all hands that what are called varieties are continually produced. The rule is probably without exception. No chick and no child is in all respects and particulars the counterpart of its brother or sister; and in such differences we have "variety" incipient. No naturalist could tell how far this variation could be carried; but the great mass of them held that never by any amount of internal or external change, nor by the mixture of both, could the offspring of the same progenitor so far deviate from each other as to constitute different species. The function of the experimental philosopher is to combine the conditions of Nature and to produce her results; and this was the method of Darwin.* He made himself acquainted with what could, without any manner of doubt, be done in the way of producing variation. He associated himself with pigeon-fanciers—bought, begged, kept, and observed every breed that he could obtain. Though derived from a common stock, the diversities of these pigeons were such that "a score of them might be chosen which, if shown to an ornithologist, and he were told that they were wild birds, would certainly be ranked by him as well-defined species." The simple principle which guides the pigeon-fancier, as it does the cattle-breeder, is the selection of some variety that strikes his fancy, and the propagation of this variety by inheritance. With his eye still upon the particular appearance which he wishes to exaggerate, he selects it as it reappears in successive broods, and thus adds increment to increment until an astonishing amount of divergence from the parent type is effected. Man in this case does not produce the *elements* of the variation. He simply observes them, and, by selection, adds them together until the required result has been obtained. "No man," says Mr. Darwin, "would ever try to make a fan-

tail till he saw a pigeon with a tail developed in some slight degree in an unusual manner, or a pouter until he saw a pigeon with a crop of unusual size." Thus Nature gives the hint, man acts upon it, and, by the law of inheritance, exaggerates the deviation.

Having thus satisfied himself by indubitable facts that the organization of an animal or of a plant (for precisely the same treatment applies to plants) is to some extent plastic, he passes from variation under domestication to variation under Nature. Hitherto we have dealt with the adding together of small changes by the conscious selection of man. Can Nature thus select? Mr. Darwin's answer is, "Assuredly she can." The number of living things produced is far in excess of the number that can be supported; hence at some period or other of their lives there must be a struggle for existence; and what is the infallible result? If one organism were a perfect copy of the other in regard to strength, skill, and agility, external conditions would decide. But this is not the case. Here we have the fact of variety offering itself to Nature, as in the former instance it offered itself to man; and those varieties which are least competent to cope with surrounding conditions will infallibly give way to those that are competent. To use a familiar proverb, the weakest comes to the wall. But the triumphant fraction again breeds to over-production, transmitting the qualities which secured its maintenance, but transmitting them in different degrees. The struggle for food again supervenes, and those to whom the favorable quality has been transmitted in excess will assuredly triumph. It is easy to see that we have here the addition of increments favorable to the individual still more rigorously carried out than in the case of domestication; for not only are unfavorable specimens not selected by Nature, but they are destroyed. This is what Mr. Darwin calls "Natural Selection," which "acts by the preservation and accumulation of small inherited modifications, each profitable to the preserved being." With this idea he interpenetrates and leavens the vast store of facts that he and others have collected. We cannot, without shutting our eyes through fear or prejudice, fail to see that Darwin is here

* The first step only toward experimental demonstration has been taken. Experiments now begun might, a couple of centuries hence, furnish data of incalculable value, which ought to be supplied to the science of the future.

dealing, not with imaginary, but with true causes; nor can we fail to discern what vast modifications may be produced by natural selection in periods sufficiently long. Each individual increment may resemble what mathematicians call a "differential" (a quantity indefinitely small); but definite and great changes may obviously be produced by the integration of these infinitesimal quantities through practically infinite time.

If Darwin, like Bruno, rejects the notion of creative power acting after human fashion, it certainly is not because he is unacquainted with the numberless exquisite adaptations on which this notion of a supernatural artificer has been founded. His book is a repository of the most startling facts of this description. Take the marvellous observation which he cites from Dr. Crüger, where a bucket with an aperture, serving as a spout, is formed in an orchid. Bees visit the flower: in eager search of material for their combs they push each other into the bucket, the drenched ones escaping from their involuntary bath by the spout. Here they rub their backs against the viscid stigma of the flower and obtain glue; then against the pollen-masses, which are thus stuck to the back of the bee and carried away. "When the bee, thus provided, flies to another flower, or to the same flower a second time, and is pushed by his comrades into the bucket, and then crawls out by the passage, the pollen-mass upon its back necessarily comes first into contact with the viscid stigma," which takes up the pollen; and this is how that orchid is fertilized. Or take this other case of the *Catasetum*. "Bees visit these flowers in order to gnaw the labellum; on doing this they inevitably touch a long, tapering, sensitive projection. This, when touched, transmits a sensation or vibration to a certain membrane, which is instantly ruptured, setting free a spring, by which the pollen-mass is shot forth like an arrow in the right direction, and adheres by its viscid extremity to the back of the bee." In this way the fertilizing pollen is spread abroad.

It is the mind thus stored with the choicest materials of the teleologist that rejects teleology, seeking to refer these wonders to natural causes. They illustrate, according to him, the method of

Nature, not the "technic" of a man-like Artificer. The beauty of flowers is due to natural selection. Those that distinguish themselves by vividly contrasting colors from the surrounding green leaves are most readily seen, most frequently visited by insects, most often fertilized, and hence most favored by natural selection. Colored berries also readily attract the attention of birds and beasts, which feed upon them, and spread their manured seeds abroad, thus giving trees and shrubs possessing such berries a greater chance in the struggle for existence.

With profound analytic and synthetic skill, Mr. Darwin investigates the cell-making instinct of the hive-bee. His method of dealing with it is representative. He falls back from the more perfectly to the less perfectly developed instinct—from the hive-bee to the humble-bee, which uses its own cocoon as a comb, and to classes of bees of intermediate skill, endeavoring to show how the passage might be gradually made from the lowest to the highest. The saving of wax is the most important point in the economy of bees. Twelve to fifteen pounds of dry sugar are said to be needed for the secretion of a single pound of wax. The quantities of nectar necessary for the wax must therefore be vast; and every improvement of constructive instinct which results in the saving of wax is a direct profit to the insect's life. The time that would otherwise be devoted to the making of wax is now devoted to the gathering and storing of honey for winter food. He passes from the humble-bee, with its rude cells, through the *Melipona* with its more artistic cells, to the hive-bee with its astonishing architecture. The bees place themselves at equal distances apart upon the wax, sweep and excavate equal spheres round the selected points. The spheres intersect, and the planes of intersection are built up with thin laminae. Hexagonal cells are thus formed. This mode of treating such questions is, as I have said, representative. He habitually retires from the more perfect and complex, to the less perfect and simple, carries you with him through stages of perfecting, adds increment to increment of infinitesimal change, and in this way gradually breaks down your reluctance

to admit that the exquisite climax of the whole could be a result of natural selection.

Mr. Darwin shirks no difficulty; and, saturated as the subject was with his own thought, he must have known, better than his critics, the weakness as well as the strength of his theory. This, of course, would be of little avail were his object a temporary dialectic victory instead of the establishment of a truth which he means to be everlasting. But he takes no pains to disguise the weakness he has discerned; nay, he takes every pains to bring it into the strongest light. His vast resources enable him to cope with objections started by himself and others, so as to leave the final impression upon the reader's mind that if they be not completely answered they certainly are not fatal. Their negative force being thus destroyed, you are free to be influenced by the vast positive mass of evidence he is able to bring before you. This largeness of knowledge and readiness of resource render Mr. Darwin the most terrible of antagonists. Accomplished naturalists have levelled heavy and sustained criticisms against him—not always with the view of fairly weighing his theory, but with the express intention of exposing its weak points only. This does not irritate him. He treats every objection with a soberness and thoroughness which even Bishop Butler might be proud to imitate, surrounding each fact with its appropriate detail, placing it in its proper relations, and usually giving it a significance which, as long as it was kept isolated, failed to appear. This is done without a trace of ill-temper. He moves over the subject with the passionless strength of a glacier; and the grinding of the rocks is not always without a counterpart in the logical pulverization of the objector. But, though, in handling this mighty theme, all passion has been stilled, there is an emotion of the intellect incident to the discernment of new truth which often colors and warms the pages of Mr. Darwin. His success has been great; and this implies not only the solidity of his work, but the preparedness of the public mind for such a revelation. On this head a remark of Agassiz impressed me more than anything else. Sprung from a race of theologians, this

celebrated man combated to the last the theory of natural selection. One of the many times I had the pleasure of meeting him in the United States was at Mr. Winthrop's beautiful residence at Brookline, near Boston. Rising from luncheon, we all halted, as if by a common impulse, in front of a window, and continued there a discussion which had been started at table. The maple was in its autumn glory; and the exquisite beauty of the scene outside seemed, in my case, to interpenetrate without disturbance the intellectual action. Earnestly, almost sadly, Agassiz turned and said to the gentlemen standing round: "I confess that I was not prepared to see this theory received as it has been by the best intellects of our time. Its success is greater than I could have thought possible."

In our day great generalizations have been reached. The theory of the origin of species is but one of them. Another, of still wider grasp and more radical significance, is the doctrine of the Conservation of Energy, the ultimate philosophical issues of which are as yet but dimly seen—that doctrine which "binds Nature fast in fate" to an extent not hitherto recognized, exacting from every antecedent its equivalent consequent, from every consequent its equivalent antecedent, and bringing vital as well as physical phenomena under the dominion of that law of causal connection which, as far as the human understanding has yet pierced, asserts itself everywhere in Nature. Long in advance of all definite experiment upon the subject, the constancy and indestructibility of matter had been affirmed; and all subsequent experience justified the affirmation. Later researches extended the attribute of indestructibility to force. This idea, applied in the first instance to inorganic, rapidly embraced organic Nature. The vegetable world, though drawing almost all its nutriment from invisible sources, was proved incompetent to generate anew either matter or force. Its matter is for the most part transmuted air; its force transformed solar force. The animal world was proved to be equally uncreative, all its motive energies being referred to the combustion of its food. The activity of each animal as a whole was proved to be the transferred activi-

ties of its molecules. The muscles were shown to be stores of mechanical force, potential until unlocked by the nerves, and then resulting in muscular contractions. The speed at which messages fly to and fro along the nerves was determined, and found to be, not as had been previously supposed, equal to that of light or electricity, but less than the speed of a flying eagle.

This was the work of the physicist: then came the conquests of the comparative anatomist and physiologist, revealing the structure of every animal, and the function of every organ in the whole biological series, from the lowest zoophyte up to man. The nervous system had been made the object of profound and continued study, the wonderful and, at bottom, entirely mysterious controlling power which it exercises over the whole organism, physical and mental, being recognized more and more. Thought could not be kept back from a subject so profoundly suggestive. Besides the physical life dealt with by Mr. Darwin, there is a psychical life presenting similar gradations, and asking equally for a solution. How are the different grades and orders of mind to be accounted for? What is the principle of growth of that mysterious power which on our planet culminates in Reason? These are questions which, though not thrusting themselves so forcibly upon the attention of the general public, had not only occupied many reflecting minds, but had been formally broached by one of them before the "Origin of Species" appeared.

With the mass of materials furnished by the physicist and physiologist in his hands, Mr. Herbert Spencer, twenty years ago, sought to graft upon this basis a system of psychology; and two years ago a second and greatly-amplified edition of his work appeared. Those who have occupied themselves with the beautiful experiments of Plateau, will remember that, when two spherules of olive-oil, suspended in a mixture of alcohol-and-water of the same density as the oil, are brought together, they do not immediately unite. Something like a pellicle appears to be formed around the drops, the rupture of which is immediately followed by the coalescence of the globules into one. There are organisms whose vital actions are almost as purely physi-

cal as that of these drops of oil. They come into contact and fuse themselves thus together. From such organisms to others a shade higher, and from these to others a shade higher still, and on through an ever-ascending series, Mr. Spencer conducts his argument. There are two obvious factors to be here taken into account—the creature and the medium in which it lives, or, as it is often expressed, the organism and its environment. Mr. Spencer's fundamental principle is, that between these two factors there is incessant interaction. The organism is played upon by the environment, and is modified to meet the requirements of the environment. Life he defines to be "a continuous adjustment of internal relations to external relations."

In the lowest organisms we have a kind of tactual sense diffused over the entire body; then, through impressions from without and their corresponding adjustments, special portions of the surface become more responsive to stimuli than others. The senses are nascent, the basis of all of them being that simple tactual sense which the sage Democritus recognized 2,300 years ago as their common progenitor. The action of light, in the first instance, appears to be a mere disturbance of the chemical processes in the animal organism, similar to that which occurs in the leaves of plants. By degrees the action becomes localized in a few pigment-cells, more sensitive to light than the surrounding tissue. The eye is here incipient. At first it is merely capable of revealing differences of light and shade produced by bodies close at hand. Followed as the interception of the light is in almost all cases by the contact of the closely-adjacent, opaque body, sight in this condition becomes a kind of "anticipatory touch." The adjustment continues; a slight bulging out of the epidermis over the pigment-granules supervenes. A lens is incipient, and, through the operation of infinite adjustments, at length reaches the perfection that it displays in the hawk and the eagle. So of the other senses; they are special differentiations of a tissue which was originally vaguely sensitive all over.

With the development of the senses the adjustments between the organism

and its environment gradually extend in *space*, a multiplication of experiences and a corresponding modification of conduct being the result. The adjustments also extend in *time*, covering continually greater intervals. Along with this extension in space and time, the adjustments also increase in specialty and complexity, passing through the various grades of brute-life and prolonging themselves into the domain of reason. Very striking are Mr. Spencer's remarks regarding the influence of the sense of touch upon the development of intelligence. This is, so to say, the mother-tongue of all the senses, into which they must be translated to be of service to the organism. Hence its importance. The parrot is the most intelligent of birds, and its tactual power is also greatest. From this sense it gets knowledge unattainable by birds which cannot employ their feet as hands. The elephant is the most sagacious of quadrupeds—its tactual range and skill, and the consequent multiplication of experiences, which it owes to its wonderfully adaptable trunk, being the basis of its sagacity. Feline animals, for a similar cause, are more sagacious than hoofed animals—attonement being to some extent made, in the case of the horse, by the possession of sensible prehensile lips. In the *Primates* the evolution of intellect and the evolution of tactual appendages go hand in hand. In the most intelligent anthropoid apes we find the tactual range and delicacy greatly augmented, new avenues of knowledge being thus opened to the animal. Man crowns the edifice here, not only in virtue of his own manipulatory power, but through the enormous extension of his range of experience, by the invention of instruments of precision, which serve as supplemental senses and supplemental limbs. The reciprocal action of these is finely described and illustrated. That chastened intellectual emotion to which I have referred in connection with Mr. Darwin is, I should say, not absent in Mr. Spencer. His illustrations possess at times exceeding vividness and force, and from his style on such occasions it is to be inferred that the ganglia of this apostle of the understanding are sometimes the seat of a nascent poetic thrill.

It is a fact of supreme importance that

actions, the performance of which at first requires even painful effort and deliberation, may, by habit, be rendered automatic. Witness the slow learning of its letters by a child, and the subsequent facility of reading in a man, when each group of letters which forms a word is instantly and without effort fused to a single perception. Instance the billiard-player, whose muscles of hand and eye, when he reaches the perfection of his art, are unconsciously co-ordinated. Instance the musician, who, by practice, is enabled to fuse a multitude of arrangements, auditory, tactual, and muscular, into a process of automatic manipulation. Combining such facts with the doctrine of hereditary transmission, we reach a theory of instinct. A chick, after coming out of the egg, balances itself correctly, runs about, picks up food, thus showing that it possesses a power of directing its movements to definite ends. How did the chick learn this very complex co-ordination of eye, muscles, and beak? It has not been individually taught; its personal experience is *nil*; but it has the benefit of ancestral experience. In its inherited organization are registered all the powers which it displays at birth. So also as regards the instinct of the hive-bee already referred to. The distance at which the insects stand apart when they sweep their hemispheres and build their cells is "organically remembered." Man also carries with him the physical texture of his ancestry, as well as the inherited intellect bound up with it. The defects of intelligence during infancy and youth are probably less due to a lack of individual experience than to the fact that in early life the cerebral organization is still incomplete. The period necessary for completion varies with the race, and with the individual. As a round shot outstrips a rifled one on quitting the muzzle of the gun, so the lower race in childhood may outstrip the higher. But the higher eventually overtakes the lower, and surpasses it in range. As regards individuals, we do not always find the precocity of youth prolonged to mental power in maturity; while the dulness of boyhood is sometimes strikingly contrasted with the intellectual energy of after-years. Newton, when a boy, was weakly, and he showed no par-

tical aptitude at school; but in his eighteenth year he went to Cambridge, and soon afterward astonished his teachers by his power of dealing with geometrical problems. During his quiet youth his brain was slowly preparing itself to be the organ of those energies which he subsequently displayed.

By myriad blows (to use a Lucretian phrase) the image and superscription of the external world are stamped as states of consciousness upon the organism, the depth of the impression depending upon the number of the blows. When two or more phenomena occur in the environment invariably together, they are stamped to the same depth or to the same relief, and indissolubly connected. And here we come to the threshold of a great question. Seeing that he could in no way rid himself of the consciousness of Space and Time, Kant assumed them to be necessary "forms of thought," the moulds and shapes into which our intuitions are thrown, belonging to ourselves solely and without objective existence. With unexpected power and success Mr. Spencer brings the hereditary-experience theory, as he holds it, to bear upon this question. "If there exist certain external relations which are experienced by all organisms at all instants of their waking lives—relations which are absolutely constant and universal—there will be established answering internal relations that are absolutely constant and universal. Such relations we have in those of Space and Time. As the substratum of all other relations of the Non-Ego, they must be responded to by conceptions that are the substrata of all other relations in the Ego. Being the constant and infinitely repeated elements of thought, they must become the automatic elements of thought—the elements of thought which it is impossible to get rid of—the 'forms of intuition.'"

Throughout this application and extension of the "Law of Inseparable Association," Mr. Spencer stands on totally different ground from Mr. John Stuart Mill, invoking the registered experiences of the race instead of the experiences of the individual. His overthrow of Mr. Mill's restriction of experience is, I think, complete. That restriction ignores the power of organizing experience furnished at the outset to each indi-

vidual; it ignores the different degrees of this power possessed by different races and by different individuals of the same race. Were there not in the human brain a potency antecedent to all experience, a dog or cat ought to be as capable of education as a man. These predetermined internal relations are independent of the experiences of the individual. The human brain is the "organized register of infinitely numerous experiences received during the evolution of life, or rather during the evolution of that series of organisms through which the human organism has been reached. The effects of the most uniform and frequent of these experiences have been successively bequeathed, principal and interest, and have slowly mounted to that high intelligence which lies latent in the brain of the infant. Thus it happens that the European inhabits from twenty to thirty cubic inches more of brain than the Papuan. Thus it happens that faculties, as of music, which scarcely exist in some inferior races, become congenital in superior ones. Thus it happens that out of savages unable to count up to the number of their fingers, and speaking a language containing only nouns and verbs, arise at length our Newtons and Shakespeares."

At the outset of this address it was stated that physical theories which lie beyond experience are divided by a process of abstraction from experience. It is instructive to note from this point of view the successive introduction of new conceptions. The idea of the attraction of gravitation was preceded by the observation of the attraction of iron by a magnet, and of light bodies by rubbed amber. The polarity of magnetism and electricity appealed to the senses; and thus became the substratum of the conception that atoms and molecules are endowed with definite, attractive, and repellent poles, by the play of which definite forms of crystalline architecture are produced. Thus molecular force becomes *structural*. It required no great boldness of thought to extend its play into organic Nature, and to recognize in molecular force the agency by which both plants and animals are built up. In this way, out of experience arise conceptions which are wholly ultra-experiential.

The *origination* of life is a point lightly touched upon, if at all, by Mr. Darwin

and Mr. Spencer. Diminishing gradually the number of progenitors, Darwin comes at length to one "primordial form;" but he does not say, as far as I remember, how he supposes this form to have been introduced. He quotes with satisfaction the words of a celebrated author and divine who had "gradually learned to see that it is just as noble a conception of the Deity to believe He created a few original forms, capable of self-development into other and needful forms, as to believe that He required a fresh act of creation to supply the voids caused by the action of his laws." What Mr. Darwin thinks of this view of the introduction of life I do not know. Whether he does or does not introduce his "primordial form" by a creative act, I do not know. But the question will inevitably be asked, "How came the form there?" With regard to the diminution of the number of created forms, one does not see that much advantage is gained by it. The anthropomorphism, which it seemed the object of Mr. Darwin to set aside, is as firmly associated with the creation of a few forms as with the creation of a multitude. We need clearness and thoroughness here. Two courses, and two only, are possible. Either let us open our doors freely to the conception of creative acts, or, abandoning them, let us radically change our notions of matter. If we look at matter as pictured by Democritus, and as defined for generations in our scientific text-books, the absolute impossibility of any form of life coming out of it would be sufficient to render any other hypothesis preferable; but the definitions of matter given in our text-books were intended to cover its purely physical and mechanical properties. And, taught as we have been to regard these definitions as complete, we naturally and rightly reject the monstrous notion that out of *such* matter any form of life could possibly arise. But are the definitions complete? Everything depends on the answer to be given to this question. Trace the line of life backward, and see it approaching more and more to what we call the purely physical condition. We reach at length those organisms which I have compared to drops of oil suspended in a mixture of alcohol-and-water. We reach the *protogenes* of Haeckel, in which we

have "a type distinguishable from a fragment of albumen only by its finely-granular character." Can we pause here? We break a magnet, and find two poles in each of its fragments. We continue the process of breaking, but, however small the parts, each carries with it, though enfeebled, the polarity of the whole. And, when we can break no longer, we prolong the intellectual vision to the polar molecules. Are we not urged to do *something* similar in the case of life? Is there not a temptation to close to some extent with Lucretius, when he affirms that "Nature is seen to do all things spontaneously of herself without the meddling of the gods?" or with Bruno, when he declares that Matter is not "that mere empty *capacity* which philosophers have pictured her to be, but the universal mother who brings forth all things as the fruit of her own womb?" The questions here raised are inevitable. They are approaching us with accelerated speed, and it is not a matter of indifference whether they are introduced with reverence or irreverence. Abandoning all disguise, the confession that I feel bound to make before you is that I prolong the vision backward across the boundary of the experimental evidence, and discern in that matter, which we in our ignorance, notwithstanding our professed reverence for its Creator, have hitherto covered with opprobrium, the promise and potency of every form and quality of life.

The "materialism" here enunciated may be different from what you suppose, and I therefore crave your gracious patience to the end. "The question of an external world," says Mr. J. S. Mill, "is the great battle-ground of metaphysics."^{*} Mr. Mill himself reduces external phenomena to "possibilities of sensation." Kant, as we have seen, made time and space "forms" of our own intuitions. Fichte, having first by the inexorable logic of his understanding proved himself to be a mere link in that chain of eternal causation which holds so rigidly in Nature, violently broke the chain by making Nature, and all that it inherits, an apparition of his own mind.[†] And it is

* "Examination of Hamilton," p. 154.

† "Bestimmung des Menschen."

by no means easy to combat such notions. For, when I say I see you, and that I have not the least doubt about it, the reply is, that what I am really conscious of is an affection of my own retina. And if I urge that I can check my sight of you by touching you, the retort would be that I am equally transgressing the limits of fact; for what I am really conscious of is, not that you are there, but that the nerves of my hand have undergone a change. All we hear, and see, and touch, and taste, and smell, are, it would be urged, mere variations of our own condition, beyond which, even to the extent of a hair's breadth, we cannot go. That anything answering to our impressions exists outside of ourselves is not a *fact*, but an *inference*, to which all validity would be denied by an idealist like Berkeley, or by a skeptic like Hume. Mr. Spencer takes another line. With him, as with the uneducated man, there is no doubt or question as to the existence of an external world. But he differs from the uneducated, who think that the world really *is* what consciousness represents it to be. Our states of consciousness are mere *symbols* of an outside entity which produces them and determines the order of their succession, but the real nature of which we can never know.* In fact, the whole process of evolution is the manifestation of a Power absolutely inscrutable to the intellect of man. As little in our day as in the days of Job, can man, by searching, find

this Power out. Considered fundamentally, it is by the operation of an insoluble mystery that life is evolved, species differentiated, and mind unfolded from their prepotent elements in the immeasurable past. There is, you will observe, no very rank materialism here.

The strength of the doctrine of evolution consists, not in an experimental demonstration (for the subject is hardly accessible to this mode of proof), but in its general harmony with the method of Nature as hitherto known. From contrast, moreover, it derives enormous relative strength. On the one side we have a theory (if it could with any propriety be so called) derived, as were the theories referred to at the beginning of this address, not from the study of Nature, but from the observation of men—a theory which converts the Power whose garment is seen in the visible universe into an Artificer, fashioned after the human model, and acting by broken efforts as man is seen to act. On the other side we have the conception that all we see around us, and all we feel within us—the phenomena of physical Nature as well as those of the human mind—have their unsearchable roots in a cosmical life, if I dare apply the term, an infinitesimal span of which only is offered to the investigation of man. And even this span is only knowable in part. We can trace the development of a nervous system, and correlate with it the parallel phenomena of sensation and thought. We see with undoubting certainty that they go hand in hand. But we try to soar in a vacuum the moment we seek to comprehend the connection between them. An Archimedean fulcrum is here required which the human mind cannot command; and the effort to solve the problem, to borrow an illustration from an illustrious friend of mine, is like the effort of a man trying to lift himself by his own waistband. All that has been here said is to be taken in connection with this fundamental truth. When “nascent senses” are spoken of, when “the differentiation of a tissue at first vaguely sensitive all over” is spoken of, and when these processes are associated with “the modification of an organism by its environment,” the same parallelism, without contact or even approach to contact, is implied. There is no fusion possible between the two

* In a paper, at once popular and profound, entitled “Recent Progress in the Theory of Vision,” contained in the volume of lectures by Helmholtz published by Longmans, this symbolism of our states of consciousness is also dwelt upon. The impressions of sense are the mere *signs* of external things. In this paper Helmholtz contends strongly against the view that the consciousness of space is in-born; and he evidently doubts the power of the chick to pick up grains of corn without some preliminary lessons. On this point, he says, further experiments are needed. Such experiments have been since made by Mr. Spaulding, aided, I believe, in some of his observations by the accomplished and deeply-lamented Lady Amberley; and they seem to prove conclusively that the chick does not need a single moment's tuition to teach it to stand, run, govern the muscles of its eyes, and peck. Helmholtz, however, is contending against the notion of preëstablished harmony; and I am not aware of his views as to the organization of experiences of race or breed.

classes of facts—no motor energy in the intellect of man to carry it without logical rupture from the one to the other.

Further, the doctrine of evolution derives man, in his totality, from the interaction of organism and environment through countless ages past. The human understanding, for example—the faculty which Mr. Spencer has turned so skillfully round upon its own antecedents—is itself a result of the play between organism and environment through cosmic ranges of time. Never surely did prescription plead so irresistible a claim. But then it comes to pass that, over and above his understanding, there are many other things appertaining to man whose prescriptive rights are quite as strong as that of the understanding itself. It is a result, for example, of the play of organism and environment that sugar is sweet and that aloes are bitter, that the smell of henbane differs from the perfume of a rose. Such facts of consciousness (for which, by-the-way, no adequate reason has ever yet been rendered) are quite as old as the understanding itself, and many other things can boast an equally ancient origin. Mr. Spencer at one place refers to that most powerful of passions—the amatory passion—as one which, when it first occurs, is antecedent to all relative experience whatever, and we may pass its claim as being at least as ancient and as valid as that of the understanding itself. Then there are such things woven into the texture of man as the feeling of awe, reverence, wonder—and not alone the sexual love just referred to, but the love of the beautiful, physical and moral, in Nature, poetry, and art. There is also that deep-set feeling which, since the earliest dawn of history, and probably for ages prior to all history, incorporated itself in the religions of the world. You who have escaped from these religions in the high-and-dry light of the understanding may deride them; but in so doing you deride accidents of form merely, and fail to touch the immovable basis of the religious sentiment in the emotional nature of man. To yield this sentiment reasonable satisfaction is the problem of problems at the present hour. And grotesque in relation to scientific culture as many of the religions of the world have been and are—dangerous, nay de-

structive, to the dearest privileges of freemen as some of them undoubtedly have been, and would, if they could, be again—it will be wise to recognize them as the forms of force, mischievous if permitted to intrude on the region of *knowledge*, over which it holds no command, but capable of being guided by liberal thought to noble issues in the region of *emotion*, which is its proper sphere. It is vain to oppose this force with a view to its extirpation. What we should oppose, to the death if necessary, is every attempt to found upon this elemental bias of man's nature a system which should exercise despotic sway over his intellect. I do not fear any such consummation. Science has already, to some extent, leavened the world, and it will leaven it more and more. I should look upon the mild light of science breaking in upon the minds of the youth of Ireland, and strengthening gradually to the perfect day, as a surer check to any intellectual or spiritual tyranny which might threaten this island, than the laws of princes or the swords of emperors. Where is the cause of fear? We fought and won our battle even in the middle ages, why should we doubt the issue of a conflict now?

The impregnable position of science may be described in a few words. All religious theories, schemes, and systems which embrace notions of cosmogony, or which otherwise reach into its domain, must, in so far as they do this, submit to the control of science, and relinquish all thought of controlling it. Acting otherwise proved disastrous in the past, and it is simply fatuous to-day. Every system which would escape the fate of an organism too rigid to adjust itself to its environment, must be plastic to the extent that the growth of knowledge demands. When this truth has been thoroughly taken in, rigidity will be relaxed, exclusiveness diminished, things now deemed essential will be dropped, and elements now rejected will be assimilated. The lifting of the life is the essential point, and as long as dogmatism, fanaticism, and intolerance, are kept out, various modes of leverage may be employed to raise life to a higher level. Science itself not unfrequently derives motive-power from an ultra-scientific source. Whewell speaks of enthusiasm of temper as a hindrance to science; but he means the

enthusiasm of weak heads. There is a strong and resolute enthusiasm in which science finds an ally; and it is to the lowering of this fire rather than to a diminution of intellectual insight that the lessening productiveness of men of science in their mature years is to be ascribed. Mr. Buckle sought to detach intellectual achievement from moral force. He greatly erred; for, without moral force to whip it into action, the achievements of the intellect would be poor indeed.

It has been said that science divorces itself from literature. The statement, like so many others, arises from lack of knowledge. A glance at the less technical writings of its leaders—of its Helmholtz, its Huxley, and its Du Bois-Reymond—would show what breadth of literary culture they command. Where, among modern writers can you find their superiors in clearness and vigor of literary style? Science desires no isolation, but freely combines with every effort toward the bettering of man's estate. Single-handed, and supported not by outward sympathy, but by inward force, it has built at least one great wing of the many-mansioned home which man in his totality demands. And if rough walls and protruding rafter-ends indicate that on one side the edifice is still incomplete, it is only by wise combination of the parts required with those already irrevocably built that we can hope for completeness. There is no necessary incongruity between what has been accomplished and what remains to be done. The moral glow of Socrates, which we all feel by ignition, has in it nothing incompatible with the physics of Anaxagoras which he so much scorned, but which he would hardly scorn to-day. And here I am reminded of one among us, hoary, but still strong, whose prophet-voice some thirty years ago, far more than any other of this age, unlocked whatever of life and nobleness lay latent in its most gifted minds—one fit to stand beside Socrates or the Maccabean Eleazar, and to dare and suffer all that they suffered and dared—fit, as he once said of Fichte, "to have been the teacher of the Stoa, and to have discoursed of beauty and virtue in the groves of Academe." With a capacity to grasp physical principles, which his friend Goethe did not possess, and which

even total lack of exercise has not been able to reduce to atrophy, it is the world's loss that he, in the vigor of his years, did not open his mind and sympathies to science, and make its conclusions a portion of his message to mankind. Marvellously endowed as he was—equally equipped on the side of the heart and of the understanding—he might have done much toward teaching us how to reconcile the claims of both, and to enable them in coming times to dwell together in unity of spirit and in the bond of peace.

And now the end is come. With more time, or greater strength and knowledge, what has been here said might have been better said, while worthy matters here omitted might have received fit expression. But there would have been no material deviation from the views set forth. As regards myself, they are not the growth of a day; and as regards you, I thought you ought to know the environment which, with or without your consent, is rapidly surrounding you, and in relation to which some adjustment on your part may be necessary. A hint of Hamlet's, however, teaches us all how the troubles of common life may be ended; and it is perfectly possible for you and me to purchase intellectual peace at the price of intellectual death. The world is not without refuges of this description; nor is it wanting in persons who seek their shelter and try to persuade others to do the same. I would exhort you to refuse such shelter, and to scorn such base repose—to accept, if the choice be forced upon you, commotion before stagnation, the leap of the torrent before the stillness of the swamp. In the one there is at all events life, and therefore hope; in the other, none. I have touched on debatable questions, and led you over dangerous ground—and this partly with the view of telling you, and through you the world, that as regards these questions science claims unrestricted right of search. It is not to the point to say that the views of Lucretius and Bruno, of Darwin and Spencer, may be wrong. Here I should agree with you, deeming it indeed certain that these views will undergo modification. But the point is, that, whether right or wrong, we claim the freedom to discuss them. The

ground which they cover is scientific ground; and the right claimed is one made good through tribulation and anguish, inflicted and endured in darker times than ours, but resulting in the immortal victories which science has won for the human race. I would set forth equally the inexorable advance of man's understanding in the path of knowledge, and the unquenchable claims of his emotional nature which the understanding can never satisfy. The world embraces not only a Newton, but a Shakespeare—not only a Boyle, but a Raphael—not only a Kant, but a Beethoven—not only a Darwin, but a Carlyle. Not in each of these, but in all, is human nature whole. They are not opposed, but supplementary—not mutually exclusive, but reconcilable. And if, still unsatisfied, the human mind, with the yearning of a pilgrim for his distant home, will

turn to the mystery from which it has emerged, seeking so to fashion it as to give unity to thought and faith, so long as this is done, not only without intolerance or bigotry of any kind, but with the enlightened recognition that ultimate fixity of conception is here unattainable, and that each succeeding age must be held free to fashion the mystery in accordance with its own needs—then, in opposition to all the restrictions of materialism, I would affirm this to be a field for the noblest exercise of what, in contrast with the *knowing* faculties, may be called the *creative* faculties of man. Here, however, I must quit a theme too great for me to handle, but which will be handled by the loftiest minds ages after you and I, like streaks of morning cloud, shall have melted into the infinite azure of the past.

WOMAN SUFFRAGE.—A REPLY.

BY PROF. J. E. CAIRNES.

THE recent utterance of Mr. Goldwin Smith against Woman Suffrage has been for many friends of the cause, it may be confessed, a painful surprise. It seemed strange and almost portentous that the voice which had been so often, so boldly, and so eloquently raised on behalf of liberal principles, should suddenly be heard issuing from the Conservative camp, in opposition to a measure which many Liberals regard as amongst the most important of pending reforms. No one, however, who has read Mr. Smith's essay will have any doubt that the opinions expressed in it—urged as they are with all his characteristic energy—are as genuine and sincere as anything he has ever written on the Liberal side. Whether he has made any converts to his views amongst the supporters of the movement he has attacked, is more than I can say; but as one of those who have not been convinced by his reasonings, I wish to state in what they seem to me to be unsatisfactory, and why, having given them my best consideration, I still remain in my former state of mind.

There is one portion of Mr. Smith's remarks into which, I may as well say

here at the outset, I do not propose to follow him. I refer to what he has said of Mr. Mill's relations with his wife, and of his estimate of her mental powers. These are points respecting which, in my opinion, the data do not exist, at least within reach of the general public, for forming a trustworthy opinion. They are, moreover, absolutely irrelevant to the practical controversy, which should be decided, as Mr. Smith himself in his essay confesses, "on its merits," "the interest of the whole community" being the test, and not by what people may think as to the life and opinions of any individual, however eminent. Further, their discussion cannot but inflict the keenest pain on more than one living person, who, from the nature of the case, are precluded from defending those whom they hold dear. To employ such arguments, therefore, is to use poisoned shafts; and I should have thought that Mr. Goldwin Smith would be about the last man living to resort to such modes of warfare.

Nor is this the only topic introduced by Mr. Smith into this discussion, which might, if not with advantage, at least

without detriment to his argument, have been omitted. In his criticism of Mr. Mill's view of the historical origin of the present disabilities of women, there is much, the connection of which with the practical question now before the English public it is not very easy to discern. When indeed Mr. Mill first took the question up, the discussion of this aspect of the case was imperatively demanded; because the thing then to be done was, not simply to find arguments to prove the expediency of admitting women to the suffrage, but first of all, and most difficult of all, to gain a hearing for his cause—to make some impression on the solid mass of prejudice that was arrayed against any consideration of the subject; and this could only be done by showing the factitious nature of the existing relation of the sexes. Accordingly Mr. Mill addressed himself to this task, and in his work on the 'Subjection of Women' deduced their disabilities from that primitive condition of the human race in which man employed his superior physical strength to coerce woman to his will. Such being the origin of the subjection of women, the disabilities complained of Mr. Mill regarded as, in ethnological phrase, "survivals" from a state of society in which physical force was supreme. To this explanation Mr. Smith demurs, and contends that the "lot of the woman has not been determined by the will of the man, at least in any considerable degree." According to him it had its origin in those circumstances which made it expedient, on public grounds, that in the early stages of civilization the family should be socially, legally, and politically a unit. Into this portion of the controversy, however, I cannot see that there would be any advantage in entering. Whether Mr. Mill was right or wrong in his view of the historical question, he was at all events eminently successful in the purpose for which he introduced the discussion. He has secured a hearing for the cause of woman, so effectually, that we may now at least feel confident that it will not be ultimately decided on other grounds than those of reason and justice. Nor does it in truth matter whether in approaching the question of woman suffrage we adopt Mr. Mill's or Mr. Smith's theory. Both alike regard the existing disabilities of women

as "survivals"—Mr. Mill, as survivals from a very early period in which physical force was supreme; Mr. Smith, as survivals from the state of things which produced the peculiar constitution of the patriarchal family; but both as survivals, and therefore as belonging to a condition of life which has passed away. The point is thus of purely archæological interest, while the real question now before the public is, not as to the origin of woman's disabilities, but as to their present expediency; "the interest of the whole community," to borrow once more Mr. Smith's language, being "the test."

In the Bill lately before Parliament the intention of the framers, as the reader is aware, was to confer the suffrage on widows and spinsters only; married women having been expressly excluded from its operation. Mr. Smith, in entering on the discussion, is naturally anxious to deal with the question in its broadest form, and accordingly declines to be bound by this limited conception of it. He may be perfectly justified in this course; but the reasons given by him for extending the scope of the controversy are by no means convincing. To say that "marriage could hardly be treated as politically penal" is to put the argument for his view into a neat phrase; but Englishmen have not hitherto been much governed by phrases, and I hope they are not now going to begin to be. The political disqualification which attaches to the military and naval services, as well as to some branches of the civil service, might also be described as a "penal" incident of those honorable callings, but it is nevertheless maintained; and I have no doubt that if people come to believe that it is advantageous to give the suffrage to widows and spinsters, but disadvantageous to extend it to married women, they will set epigrams at defiance, and draw the line exactly where it is drawn in Mr. Forsyth's Bill. Again, I deny altogether that there is anything in the logic of the case that would compel those who have given the suffrage to women, to take the further step of admitting them to Parliament. "Surely," says Mr. Smith, "she who gives the mandate is competent herself to carry"—on the principle, I suppose, that

"Who drives fat oxen should himself be fat."

But granting, for argument's sake, that she is competent to carry *her own* mandate, it still does not follow that she is competent to carry the mandates of *other people*; and this is what the right to a seat in Parliament means. Indeed it is only quite lately that the law has ceased to distinguish between the right to vote and the right to be elected;* and if the distinction no longer exists, its abolition has been due, not in the least to a desire for logical consistency, but simply to the fact that the qualification required by the law for a seat in Parliament was found in practice ineffective for its purpose and in other ways mischievous. If it prove on full examination that the character and circumstances of women are such as to render their admission to Parliament unadvisable on public grounds, those who are in favor of giving them the suffrage will be perfectly within their right in taking their stand at this point, and in refusing to grant them the larger concession. For my own part, as I do not believe that any detriment would come from including married women with others in the grant of the suffrage, or from the admission of women to Parliament, I am quite willing to argue the question on the broader ground on which Mr. Smith desires to place it.*

The most important argument advanced by Mr. Smith against the policy under consideration is contained in the following passages:—"The question whether female suffrage on an extended scale is good for the whole community is probably identical, practically speaking, with the question whether it is good

for us to have free institutions or not. Absolute monarchy is founded on personal loyalty. Free institutions are founded on the love of liberty, or, to speak more properly, on the preference of legal to personal government. But the love of liberty and the desire of being governed by law alone appear to be characteristically male" (p. 145). From this position Mr. Smith concludes that "to give women the franchise is simply to give them the power of putting an end actually and virtually to all franchises together." "It may not be easy," he allows, "to say beforehand what course the demolition of free institutions by female suffrage would take." "But," he holds, "there can be little doubt that in all cases, if power were put into the hands of the women, free government, and with it liberty of opinion would fall."

It cannot be denied that the consequences here indicated as likely to follow from the extension of the suffrage to women are sufficiently serious; and we may admit that a better reason could not easily be imagined for withholding anything from anybody than that its concession "would probably overturn the institutions on which the hopes of the world rest." But the greatness of a fear does not prove that it rests on solid grounds; and when we come to examine the grounds of Mr. Smith's dark forebodings, we find them about as substantial as the stuff that dreams are made of. "The female need of protection," he says, "of which, so long as women remain physically weak, and so long as they are mothers, it will be impossible to get rid, is apparently accompanied by a preference for personal government." "Women are priest-ridden;" but this does not go to the root of the "reactionary tendency characteristic of the sex." The effect of those physical and physiological peculiarities is, Mr. Smith thinks, to give "an almost uniform bias to the political sentiments of women;" this bias being opposed to law and liberty, and in favor of personal government; so that women may be trusted, whenever an opportunity offers, to act *en masse* for the destruction of free institutions.

Women in these passages are spoken of as if, so to speak, *in vacuo*: it is not to the women of any particular country or age that the description applies, but to

* In the case of clergymen, as well as in other cases, the distinction is still maintained.

† I cannot, however, go the length that Mr. Smith appears inclined to go in one passage, where he argues, or seems to argue, that all who are in favor of woman suffrage are bound by their own principles to vote, under all circumstances, for woman candidates. He would scarcely, I presume, contend that all who are in favor of Catholic Emancipation are bound, when a Catholic offers himself, to vote for one; and, similarly, that those who favor Jewish Emancipation are bound, when they can, to vote for Jews; but, unless he is prepared to go this length, on what ground does he hold that the advocates of woman suffrage in America must, "if they had considered the consequences of their own principles," have voted for Mrs. Victoria Woodhull?

woman in the abstract. In conformity with this, the illustrations which follow are taken by Mr. Smith from various ages and countries—I should have said with tolerable impartiality, if it were not that, strangely enough, scarcely any reference is made to the women of modern England. And yet it is the women of modern England whose case is in issue. Now this is a point of some importance; because it is quite possible, at least as I regard it—not being a believer in “natural rights,”—that the suffrage may be as good a thing for women in certain stages of social progress, as for men, but a bad thing for both where the social conditions are different. This being so, it is not obvious how Mr. Smith helps the intelligent discussion of the question by taking his examples at random from ancient Rome, Italy, France, the United States, England in the seventeenth century—in a word, from any source where he can find cases to suit his purpose, but without the least reference to the special circumstances of each case. I have no desire to restrict unduly the range of the discussion; but I think that, when examples are taken from foreign countries, and still more when they are taken from former ages, with a view to prejudice the claims of Englishwomen to the franchise, some attempt should be made to show that the cases cited are really pertinent to the question in hand.

Turning, then to the persons and country immediately concerned, let us consider how far the state of things here affords any support to Mr. Smith's speculations. I will not attempt to deny that there may be priest-ridden women in England, possibly in considerable numbers; nor will I dispute what some well-informed persons have asserted, that the passing of a woman suffrage bill would not improbably, at all events for a time, give an accession of political influence to the clergy. But granting this, and even conceding, for the sake of argument, Mr. Smith's theory as to the natural bias of the female mind, we are still a long way off from the terrible catastrophe that his fears portend. “Female suffrage,” he says, “would give a vast increase of power to the clergy;” but we have still to ask if the English clergy, Church and Nonconformist, are, as a body, ready to join in a crusade against

free institutions. I am quite unable to discover what the grounds are for such a supposition; but if this cannot be assumed, then their influence would not be exercised in the direction Mr. Smith apprehends, and his fears for free institutions are groundless. Even if we were to make the extravagant supposition that the clergy are to a man in favor of personal government and absolutism, there would still be husbands, fathers, and brothers, whose appeals on behalf of free government would not surely pass altogether unheeded. Is it being over sanguine to assume that at the worst a sufficient number of women would be kept back from the polls to leave the victory with the cause that is “characteristically male?”

In short, we have only to attempt to realize the several conditions, *all of which would need to be fulfilled before the catastrophe which Mr. Smith dreads could even be approached*, in order to perceive the extravagant improbability, if not intrinsic absurdity, of his apprehensions. But instead of attempting to follow further the possible consequences of social and political combinations which are never likely to have any existence outside Mr. Smith's fancy, let us consider for a moment the theory he has advanced as to the mental constitution of women, which lies at the bottom of the whole speculation. Women, it seems, are so constituted by nature as to be incapable of the “love of liberty, and the desire of being governed by law;” and this results from a “sentiment inherent in the female temperament,” “formed by the normal functions and circumstances of the sex.” Now if this be so—if the sentiments of women with regard to government and political institutions are thus determined by physiological causes too powerful to be modified by education and experience, then those sentiments would in all countries and under all conditions of society be essentially the same. But is this the fact? On the contrary, is it not matter of common remark that the whole attitude of women towards politics is strikingly different in different countries; that it is one thing in England, another in the United States, something different from either in France and Italy, and something different from all in Turkey and the East? and, not to travel be-

yond the range of the present controversy, do we not find within the United Kingdom almost every variety of political opinion prevailing amongst women, according to the circumstances of their educational and social surroundings? It may be true that the interest taken by women in politics has hitherto been in general somewhat languid; that, as a body, they are less alive than men to the advantages of political liberty and of legal government. But is not this precisely what was to be expected, supposing their political opinions to be subject to the same influences which determine the political opinions of men? As a rule they have from the beginning of things been excluded from politics; their whole education has been contrived, one might say, with the deliberate purpose of giving to their sentiments an entirely different bent; home and private life have been inculcated on them as the only proper sphere for their ambition; yet in spite of these disadvantages, by merely mixing in society with men who take an interest in politics, a very great number of women have come to share that interest, while there are some, as Mr. Smith admits—I will add a rapidly increasing number—"eminently capable of understanding and discussing political questions." Can it be said that of the women who in this country take an interest in politics the bias of their political sentiments is uniformly in one direction, and this—the direction of personal government and absolutism? I can only say, if this be Mr. Smith's experience, it is singularly different from mine. No doubt there are women in abundance who care nothing for politics, and who would be quite content to live under any government which offered a fair promise of peace and security; but may not precisely the same be said of no inconsiderable number of men even in England? Would it not be easy to find men enough, and these by no means amongst the residuum, who take no interest at all in politics, and who, so far as they are concerned, would be willing to hand over the destinies of the human race to-morrow to a Cæsar, or to any one else who, they had reason to believe, would maintain the rights of property, and keep their own precious persons safe? This state of feeling amongst some men is not considered to prove that men

in general are unfitted by nature for the functions of citizenship under a free government; and when we meet exactly the same phenomenon amongst women, why are we to deduce from it a conclusion which in the case of men we should repudiate?

In short, the patent facts of experience in this country (and if here or anywhere the facts are as I have stated them, they suffice to dispose of Mr. Smith's theory) are consistent with one supposition and with one supposition only—the existence in women of political capabilities which may be developed in almost any direction, according to the nature of the influences brought to bear upon them. It may very well be that, when experience has furnished us with sufficient data for observation, a something will prove to be discernible in the political opinions of the two sexes in the nature of a characteristic quality; but at present conjecture upon this subject is manifestly premature; and Mr. Smith's arrow, apparently shot at a venture, we may confidently say, has not hit the mark. The love of liberty and the desire of being governed by law are feelings which have as yet been developed in but a very small proportion of men; they have been developed in a still smaller proportion of women, but the difference is not greater than the difference in the education and circumstances of the two sexes is amply sufficient to account for.

Mr. Smith having thoroughly frightened himself by the chimeras his imagination had conjured up as the probable result of giving the suffrage to women, puts the question:—"But would the men submit?" and he resorts to an ingenious, though perhaps questionable, speculation on the ultimate sanctions of law, to show that they would not. If the laws passed by women were such as men disapproved of, "the men," he says, "would, of course, refuse execution; law would be set at defiance, and government would be overturned" (p. 146). When, therefore, "the female vote" came to be taken "on the fate of free institutions," and the decree for their abolition went forth, it seems that, after all, it would prove mere *brutum fulmen*. The consummation would never take place; and the institutions on which the hopes of the world rest would remain erect, unharmed amid

the impotent feminine rage surging around, much (if one may venture on a profane illustration) like one of those gin palaces in the United States that has held its ground against the psalmody of the whisky crusaders. One would have thought that this reflection would have brought some solace to Mr. Smith's soul; but, strange to say, he regards it as an aggravation of the impending evils; and would apparently be better pleased if, in the supposed contingency, men in general should exhibit the same implicit subserviency which, he tells us, has been shown by a man, somewhere in the United States, who, under his wife's compulsion, is in the habit of working for her as a hired laborer—a fact, by the way, not very happily illustrating his theory of the ultimate sanctions of law.

In truth this portion of Mr. Smith's argument—and it is in a logical sense the very heart of his case, in such sort, that, this part failing, the whole collapses—is so utterly—I will not say, weak—but so utterly unlike the sort of argument ordinarily to be found in his political writings, that it is difficult to resist the impression that it does not represent the real grounds of his conviction, but is rather a theory excogitated after conviction to satisfy that intellectual craving which an opinion formed on other grounds than reason invariably produces. And this impression is confirmed, if not reduced to certainty, as we continue the perusal of his essay. In an early passage Mr. Smith had told us that he "himself once signed a petition for female household suffrage got up by Mr. Mill;" adding that, when he signed it, he "had not seen the public life of women in the United States." Further on he gives us an account of this public life as he conceives it; and I have no doubt that we have here disclosed to us the real source, if not of his present opinions on woman suffrage, at least of the intensity with which they are held. In the United States, he says, "a passion for emulating the male sex has undoubtedly taken possession of some of the women, as it took possession of women under the Roman empire, who began to play the gladiator when other excitements were exhausted." It seems further that there are women in the United States who claim, "in virtue of 'superior complexity of organization,'

not only political equality but absolute supremacy over man, of whom one has given to the movement the name of the 'Revolt of Woman.'" Again, "in the United States the privileges of women may be said to extend to impunity, not only for ordinary outrage, but for murder. The poisoner whose guilt has been proved by overwhelming evidence, is let off because she is a woman; there is a sentimental scene between her and her advocate in court, and afterwards she appears as a public lecturer.* The Whisky Crusade shows that women are practically above the law." Once more, it appears that "in the United States the grievance of which most is heard is the tyrannical stringency of the marriage tie. . . . Some of the language used . . . if reproduced might unfairly prejudice the case." Already "male legislatures in the United States have carried the liberty of divorce so far, that the next step would be the total abolition of marriage and the destruction of the family;" and this is followed by a story of "a woman who accomplished a divorce by simply shut-

* Mr. Smith gives neither dates nor places; but there can be little doubt that in the allusion in the text two distinct transactions are confounded: the inference suggested, moreover, is such as the facts by no means warrant. "The prisoner whose guilt has been proved by overwhelming evidence," but who "is let off," must, I think, refer to the case of a woman tried some time ago in one of the eastern cities, I think Baltimore. It is true she was "let off," but, as an American barrister informs me, with perfect propriety; the evidence against her not being sufficient to sustain the charge. In this case there was no sentimental scene in court, and no appearance afterwards as a public lecturer. These latter incidents belong to a case which occurred in San Francisco, in which a woman, Laura Fair by name, was tried, not for poisoning, but for shooting her paramour in the open street, and was acquitted in the face of the most conclusive evidence. The advocate, however, as I am informed, was passive in the "sentimental scene," and afterwards sued the lady for his fees. It is true, too, that she appeared shortly afterwards as a public lecturer; but Mr. Smith omits to add—what is surely pertinent to the question in hand—that she was hooted by the audience from the platform, and found it prudent to leave the town without delay. No one who knows anything of the United States would regard San Francisco as a typical American city; it is rather an extreme example of all that is most pronounced in American rowdiness; yet even in San Francisco we find that popular feeling on the immunity of women from penalties for

ting the door of the house, which was her own property, in her husband's face." It would be easy, had I space at my command, to add to these extracts; but the foregoing will suffice. One is led to ask what is the bearing of such statements, assuming the facts to be all correctly given, upon the question of woman suffrage? Mr. Smith has not troubled himself to point this out—apparently has never considered it; but finds it simpler to throw in such sensational allusions here and there as a sort of garnishing for his argument, trusting no doubt that they will produce upon the minds of his readers the same impression which they have evidently made upon his own. The case seems to be this:—Mr. Smith's finer susceptibilities have been rudely shocked by the antics of a sort of Mænad sisterhood holding their revels here and there in the vast territory of the United States; and a state of mind has supervened which leads him to regard with disfavor any cause with which these women happen to be associated. Woman suffrage, unfortunately, is one of those causes; and therefore Mr. Smith is opposed to woman suffrage.

Now to let one's opinions be formed in this way is not to be guided by experience, as some people would have us believe. Let not any one suppose that Mr. Smith has any such solid support for the views advanced in his essay. Woman suffrage has nowhere yet, out of Utah, been tried in the United States; whereas we in England have witnessed its working at least in our municipal and school-board elections. In point of experience, therefore, we who have remained at home have the advantage of Mr. Smith. His sojourn in America, however, has brought to his notice the sort of women—or, more properly, *a* sort of women—who contrive to make themselves conspicuous in the United States in social and political agitations. It may be allowed that, as depicted by him, they are not a gracious band; though hardly less attractive than some of the male politicians who figure at Caucuses, Rings, and other political gatherings in the same country. Is Mr. Smith, in disgust at this latter product of American insti-

tutions, prepared to abolish male suffrage, and with it representative government—to abolish it not merely in the United States, but here and everywhere? for to this length does his argument against woman suffrage, drawn from analogous manifestations on the part of some American women, carry him.

As I have said, Mr. Smith has not pointed out the bearing of his sensational allusions on the question of woman suffrage. If he intended them to support his case he was undoubtedly prudent in not doing so. Let us consider one or two of them in connection with the question at issue. We are told, for example, that "in the United States the privileges of women may be said to extend to impunity, not only for ordinary outrage, but for murder;" and then comes the story of the poisoner which I have examined in a note. Further on he says, "if the women ask for the suffrage, say some American publicists, they must have it; and in the same way, everything that a child cries for is apt to be given it without reflection as to the consequences of the indulgence." Now, assuming (what I am by no means disposed to admit) that the state of feeling towards women in the United States is such as these remarks suggest, it is to be observed in the first place that it is a state of feeling which has grown up, not under a female, but under an exclusively male, suffrage, and it is not easy to believe that the extension of the suffrage to women could make it worse. In the next place, the feeling in question is merely an exaggeration of that sickly sentimentalism regarding woman and all that concerns her which has come down to us from times of chivalry, and which has hitherto been fostered by the careful exclusion of women from political life, as well as from the great majority of useful and rational occupations. In the United States, a portion of the women appear, from Mr. Smith's account, to have suddenly broken loose from many of these restraints; and the use they are making of their freedom appears to be about as wise and edifying as the use which men commonly make of political freedom when it has been suddenly conferred upon them after centuries of servitude. The sentiment deserves all the scorn that Mr. Smith pours upon it; but the corrective for it,

crime is something very different from what Mr. Smith represents it.

if it exists, is not to be found in a continuance of the state of things which produced it, but in opening to women those spheres of action from which they have been hitherto debarred, and in subjecting them to the free and bracing air of equality, alike in rights and in responsibilities, with men.

And this consideration furnishes the answer to another of Mr. Smith's arguments. He considers that the admission of women to the suffrage, instead of mitigating, is likely to aggravate the violence of political strife, and in support of this view refers to the reign of Terror, the revolt of the Commune, and the American Civil War. I must own this latter reference has taken me by surprise. I have never heard before that the women of the United States during the Civil War "notoriously rivalled the men in fury and atrocity." I remember some very great atrocities committed during that war; for example, the massacre at Fort Pillow, the treatment of prisoners of war in some of the Southern military hospitals, the attempts to burn down some of the public buildings and hotels in New York; but these were all committed by men, and I have never heard of similar acts committed or attempted by American women. If Mr. Smith knows of any such, he ought to enlighten the world by stating them, or else withdraw his injurious assertion. On the other hand I have heard, and I imagine so must Mr. Smith, of the magnificent devotion to their country shown by the women of the Northern States in organizing and working hospital corps, and in actual services rendered to the wounded on the field, mitigating thus the hardships and horrors of war in a manner to reflect honor on their country and on their sex. As to the women of the Reign of Terror and the Commune, they were, at all events, not worse than the men; and the shocking crimes committed by both, so far as they are not purely mythical, are, no doubt, referable to the same causes—the tremendous excitement of the time, the wild doctrines current, and, above all, the absolute inexperience in political affairs of those to whom power, for the moment, fell.

Again, what is the bearing of Mr. Smith's statements regarding the great freedom of divorce existing in some of the

States of the Union? "Male legislatures," it seems, "have already carried the liberty of divorce so far that the next step would be the total abolition of marriage and the destruction of the family." Does it follow from this that female, or rather mixed, legislatures would go further in the same direction? for this seems to be the drift of this portion of Mr. Smith's remarks. In an earlier part of his essay he had told us that it was inherent in the nature of women to be subservient to the clergy: he now suggests that, if admitted to the suffrage, they would probably enact the abrogation of the marriage tie. Perhaps he sees his way to reconciling these two opinions, but it is not obvious on the surface; any more than it is easy to reconcile the latter with what he tells us, a few lines lower down, that women have a far deeper interest in maintaining the stringency of the marriage tie than men. If so, then, one naturally asks, why will they not use their influence to maintain it? Are they such imbeciles as not to discern their interest in so important a matter, or, discerning it, to throw their weight into the scale adverse to their most vital concerns? Here again Mr. Smith answers himself:—he tells us, "the women themselves [I presume the *Mænads*] have now, it is said, begun to draw back."

I now turn to a side of the question on which Mr. Smith lays very great stress and of which I am not in the least disposed to underrate the importance—the extension of the suffrage to married women. I do not yield to Mr. Smith, or to any one, in the firmness of my conviction that the family is at the bottom of our existing civilization, and I should, for my part, regard as dearly purchased any gain in material or political well-being which should introduce a jar or weakness into this pivot of our social system. But I believe that to open political life to women, far from being fraught with the disastrous consequences Mr. Smith anticipates, would, taking things in their entire scope, be productive of quite opposite effects. If I were asked to name the principal element of weakness in the family as things now stand, I should have no hesitation in pointing to the want of sufficient subjects of common interest between man and woman. It is owing to this that matrimonial engagements are entered into so rarely on the basis of any broad intellec-

tual sympathy, such as might furnish some security for lasting affection, and so often at the bidding of impulses and fancies that do not outlive the honeymoon; and it is owing to the same cause that so very large a proportion of the lives of most husbands and wives are spent practically apart, with little or no knowledge on the part of either of the objects or aims that engross the greater portion of the other's thoughts and energies. That under such circumstances the marriage tie is, on the whole, maintained as well as it is, seems rather matter for wonder; and to argue that the introduction of a new source of very profound common interest for husband and wife must of necessity weaken the bond, is, in my opinion, to evince a singular inability to appreciate the real dangers now besetting the institution. It is true, no doubt, that every new subject of common interest for husband and wife, must, from the nature of the case, constitute also a new possible occasion for disagreement; but if this is to be accounted a good reason for excluding women from politics, they might with equal justice be excluded from literature, from the fine arts, from every thing in which men also take an interest—above all from religion. The value of these several pursuits as bonds and cements of married life is just in proportion to the degree of common interest which husbands and wives take in them, and just in the same proportion also is the possible danger that they may become the grounds of dissension. Mr. Smith is greatly scandalized at the prospect of a man and his wife taking opposite sides in politics. I cannot see that it would be at all more scandalous than that a man and his wife should take opposite sides in religion—going, for example, every Sunday to different places of worship, where each hears the creed of the other denounced as soul-destroying and damnable. It will serve to throw light upon the present problem if we consider for a moment how it happens that this latter spectacle is on the whole so rarely presented; and that, even where the event occurs, it is so frequently found consistent with tolerable harmony in married life. The explanation, I have no doubt, is of this kind: where difference of religion consists with matrimonial happiness, it will generally be found that one or both of the partners do not take a very deep interest in the creeds

they profess; while, on the other hand, where people do feel strongly on religion, they generally take care, in forming matrimonial alliances, to consort with those who, on fundamental points, are of the same opinion with themselves. Now it seems to me that this may serve to illustrate for us what will be the practical working of politics in respect to married life when women begin to receive a political education, or at least to learn as much about politics, and take as much or as little interest in them as men do. A number only too large of men and women will probably continue for long enough to take but small interest in public affairs, and these will marry, as they do now, with little reference to each other's political opinions; but the danger of discord from politics under such circumstances would be infinitesimal. The only cases in which this danger would become serious would be when both husband and wife were strong politicians. Here, no doubt, there would be danger; though no greater, I think, than when two persons of strong but opposite religious convictions enter into marriage. Mr. Smith seems to think that, because "religion is an affair of the other world," it is less likely than politics to be an occasion of strife. This is probable enough when people do not believe in another world; but when they do, and believe also that the fate of people there will depend on what they believe in this, I cannot see the wisdom of his remark. Some of the worst and cruellest wars that have ever been waged have been religious wars; and so notoriously is religion an engenderer of strife, that it is now scarcely good manners to moot a religious question in private society, where politics are quite freely and amicably discussed. If persons of genuine but different religious opinions can contrive to get on together in married life, they would certainly not be likely to be severed by political differences, however strongly their opinions might be held. But, however this may be, my argument is that, in practice, such cases would very rarely occur. When politics became a subject of interest alike for men and women, it would very soon become a principal consideration in determining matrimonial alliances. Even now this is the case to some extent, and it will no doubt become more and more so as the political education of women advances. Mr.

Smith's question, therefore, "Would the harmony of most households bear the strain?" may be answered by saying that in very few households would there be any strain to bear; while in most—at least in those in which politics were intelligently cultivated—home life, no longer the vapid thing it is so often now, would acquire a new element of interest, and the family would be held together by powerful sympathies that now lie undeveloped.

Mr. Smith seems to think that, if women are only excluded from the suffrage, the harmony of married life can never be endangered by politics; but this is to attribute to the mere right of voting a degree of efficacy which I, for one, am not disposed to allow to it. If women only come to take an interest in politics—it matters not whether they have the suffrage or not—all the danger that can arise from the suffrage to married life will be already incurred. It is not the giving of a vote every four or five years that constitutes the danger, if danger there be; but the habitual mental attitude of husband and wife towards each other. Those, therefore, who share Mr. Smith's apprehensions on the present subject, ought clearly to take their stand against the suffrage movement very much higher up. They ought to oppose every extension of female education which may reasonably be expected to lead women to take an interest in politics. The intelligent study of history should, in the first place, be rigidly proscribed. Political economy would be excluded as a matter of course; and, along with it, that large and increasing class of studies embraced under the name 'social.' Every one of these, intelligently cultivated, leads inevitably, where faculty is not wanting, to an interest in contemporary politics; and if women are to be shut out from this field of ideas, lest perchance they should adopt opinions which should not be those of their future husbands, their education ought at once to be truncated by this large segment.

Mr. Smith indeed suggests that women who are capable of discussing political questions "will find a sphere in the press." Does he then suppose that there would be less danger to the harmony of married life from women writing in the press—writing leaders, perhaps, for strong party papers—than from tendering a vote at the polls every four or five years? Besides, the

suggestion falls utterly short of the requirements of the case. The number of women who are capable, or who desire, to find a sphere in the press are never likely to be more than a handful: the numbers who desire a liberal education, in the best and broadest sense of that word, and who are or may become quite fitted to form sound opinions on political questions, are already to be numbered by thousands, perhaps I might say by tens of thousands: what their numbers will become in another generation, I will not pretend to conjecture. Mr. Smith's suggestion, therefore, though graciously meant, is hardly to the purpose. Plainly nothing short of lopping off from the education of women some of the most important branches of human knowledge will meet the difficulty.

I must, before concluding, refer briefly (for my space is all but exhausted) to an aspect of the case touched on at the opening of these remarks—the probability of the admission of women to Parliament as a consequence of giving them the suffrage. As I have already pointed out, the latter concession by no means necessarily involves the former; so that it is quite open to those who are in favor of women suffrage to decline, or if they see fit to do so, to concede the latter privilege. For my own part, however, I desire to say frankly that I am in favor of removing, not only this, but all legal impediments whatever, to the freest choice by women of a career whether in political or in civil life. It is not that I look forward to women taking advantage, in any very large degree, of the new fields of activity that would thus be opened to them; for I am not of Mr. Smith's opinion that women can be 'unsexed' by acts of parliament. I believe that all the substantial reasons of convenience, natural aptitude, and taste, which, in the division of labor between men and women, make it desirable that women should, as a rule, take charge of the domestic half of the world's work, and men of that which is transacted out of doors, will, whatever laws we may pass, remain in their full force, and will keep the general distribution of occupations between the sexes, even under the freest competition, in the main not very different from what it now is. Still, though this, as I believe, will be the rule, there will no doubt be numerous exceptions to it; and why should there not be? If some women find it

suitable to their circumstances and to their natural talents or taste to embrace careers now open only to men, why should they be debarred from turning their abilities to the best account? If they make mistakes, as very possibly at first many will, and adopt unsuitable occupations, they will discover their mistakes, as men do now, by experience, and their failure will serve as a warning to others. If, on the other hand, they prove successful in their ventures, their success can only be a gain for themselves and for society at large. All this would hold true, even though the alternative of marriage and domestic life were really open to every woman in the country.

But it is a fact of very great importance as regards the practical aspect of this question that no inconsiderable number of women in this country pass, and can not but pass, their lives unmarried. Mr. Smith, indeed, regards this as connected "with an abnormal and possibly transient state of things." For my part I regard it as a perfectly normal phenomenon in such a country as England, and, therefore, as likely to endure. In any case, while it lasts, the exclusion of women from professional and other careers is something more than a theoretical injustice. It is a real and substantial wrong, involving penury and all its consequences, inflicted on a large number of persons, whose only

crime is their sex, and who only ask to be permitted to earn a livelihood by making themselves useful to their fellow-creatures. The claim to be admitted to Parliament, indeed, if it should be advanced (which it has not yet been), would stand on somewhat different ground. Exclusion in this case would not mean exclusion from the means of earning a livelihood, and therefore the reasons in favor of the claim are undoubtedly less strong than those which may be urged in favor of opening professional and industrial careers; but why should women not be allowed the fullest and freest use of their faculties in any walk of life, whether lucrative or otherwise, in which any competent portion of the community may think it expedient to employ them? At all events the onus of proof lies with those who would resist such a claim; and if opponents have nothing better to urge than the fatuous jokes which have hitherto been the staple of their argument, but from which Mr. Smith has had the good taste to abstain, the case against women is certainly not a strong one. Whether many women, if the opportunity offered, would be ambitious of a parliamentary career; or whether, in this case, they would find many constituencies disposed to elect them, are questions, the consideration of which may perhaps be left, without disadvantage, to a future day.—*Macmillan's Magazine*.

MONTALEMBERT.

BY THE DUKE D'AUMALE.*

It was on the 12th of June, 1553, when the Imperialists marched up for the third time to the assault of Therouanne, that antique city which belonged to one of the most warlike tribes of Gaul, and one of the bulwarks of our frontiers of the north. They advanced, irritated by a resistance which they had not expected to meet from a town, according to common report, so badly supplied with provisions. In front of the breach, and foremost of its defenders, appeared an old man of more than seventy years of age, with his face worn by fever, and discolored by jaundice.

He was the commandant of the place, and an old companion of King Francis and the Chevalier Bayard. Pike in hand, he stood ready to receive the enemy in the same undaunted fashion as formerly; and as soon as he saw the head of the storming party advancing through the ruins, he cried out, "Come on! come on this way! Captain or ensign! I am the general!" And almost instantly he fell, struck by a ball from an arquebuse, fulfilling the assurance which he had given to his sovereign: "Sire, I am indeed very ill; but when you hear that Therouanne is taken, you may rest assured that your servant is thoroughly cured: Madame Jaundice is not going to carry me off!" In this chiv-

* His Royal Highness's recent Installation Address to the French Academy.

alrous enthusiasm, in this devotion to a desperate cause, in this form of courage, as proud as it is original, you will find, gentlemen, traits of character which are well known to you. The defender of Therouanne was a Montalembert. Sixteen of his descendants fell beneath the banners of their country, and we may add to the heroic list the name of Arthur de Montalembert, Colonel of the 1st Chasseurs d'Afrique, taken off by the cholera, whilst in command of his regiment on an expedition to Morocco. A soldier's death in hospital, in presence of the enemy, is death upon the field of honor.

The eldest brother of this brave officer, Charles Forbes de Montalembert, was the first of his family who was not brought up to the profession of arms. A sword he did not wear, but, as has been already said, his eloquence was itself a sword. In parliamentary conflicts he displayed the same ardor and passion which bore along his ancestors to the fight; and by his undaunted eloquence he won the renown which they sought upon the field of battle. He merited the honor indeed of sitting amongst you. Your suffrages sought him at his post in the parliamentary tribune, when the hall of the Assembly resounded with the most glorious accents of his voice, when his eloquence had acquired the fulness of its power, and evoked the highest outbursts of enthusiasm or anger.

But what a contrast! When he came here to thank you, the political tribune was silent, and these walls alone re-echoed the voice of Freedom. You can well remember the veil of sadness which seemed to envelop this *r union*, when the public, whom you invited to your meetings, as they counted the blank places on your benches, sought with eager eyes, but in vain, to meet those of your illustrious colleagues who had been just separated from you by exile.

Exile! What memories does this word awaken in my heart! How can I avoid uttering it to-day? For, feeling myself called upon to speak to you of this great orator and of this great Christian, I feel at the same time that your wishes have been associated with the generous resolution of the National Assembly, which opened to me the gates of my country. You welcomed me the moment I set foot on the soil of my native land. You have admit-

ted the proscribed of yesterday to this association, which bears on it the name of France. With the ineffable grief of finding my country vanquished, mutilated, and bleeding, was mingled the joy of seeing her once more, of breathing her air, of being able to serve her, of dedicating to her my son. Gentlemen, since the day when you did me this honor, it has pleased God to extinguish the last flame of my domestic hearth.

Permit me here to break for a moment the order consecrated by usage, in reading to you a few lines borrowed from the writings of M. de Montalembert, that I may impress upon your minds the tenderness of heart of this vehement orator, the sweetness, the poetry of soul, of this intrepid soldier of Christ and of Liberty.

It is a fragment of the eulogium on Lacordaire, where he speaks of "that love, of all others the purest, the warmest, the most tender, the most legitimate, which, born the last, dominates all others, and survives them all. 'Tis the passion of the father for the child, for the young soul in its happiness, which he sees opening and developing under his eyes. Nothing, no, nothing in religion itself, attracts towards God, or reveals God, like the faith—the good faith—of the child, as its heart, its voice, and its look; that heart so innocent and impassioned, which will have all, because it gives up all; which will know all, because it has nothing to conceal; that voice, whose simple and sweet melody speaks to man as man should ever speak to God. I stop, lest these lines may rend some desolate heart, sorrowing at not having known this happiness, or which, having known it, must never hope for its return."

Gentlemen, it seems to me that, after this passage, I need not speak more to you of the heart of M. de Montalembert. His heart is there. There he has painted himself. If this tender picture is not new to us who have enjoyed his intimacy, it may surprise perhaps those who remember him chiefly as the citizen, ardent in political strife, the impassioned and militant polemic.

I shall now attempt to fulfill the difficult task confided to me by your choice.

The souvenirs which I have just now called up at the commencement of my discourse, testify to the origin of M. de Montalembert. It was indeed impossible to belong more completely to France.

The names which he received in baptism would indicate that he was born in a foreign land. His family had been scattered by the storm of the Revolution. Whilst his great uncle, an eminent engineer, whose works, since 1747, had opened to him the gates of the Academy of Sciences, remained under the direction of Carnot for the defence of the Republic, his father emigrated and settled in England, where he married in 1808. There your illustrious *confère* was born two years subsequently. The name of Forbes, which, in accordance with a custom unknown to our country, was joined to the old Poitou title of his family, was that of an ancient Scottish clan to which his mother belonged. The character of the child retained the stamp of this alliance. An original education without any well-arranged plan, and the unavoidable result of a concatenation of circumstances, developed a mixture of tastes, opinions, qualities and virtues, the happy union of which combined to form an accomplished man, and a remarkable type of the union of two races.

After the Restoration, the Count René Marc de Montalembert returned to France with the princes whose exile he had shared; but the new government confided to him a mission which again separated him from the soil of his native country. Appointed minister at Stuttgart he felt no wish to associate the fate of his son with the uncertainties, often the wandering uncertainties, of diplomatic life. The little Charles was confided to the care of his maternal grandfather, and his infancy passed away pleasantly under the roof of a benevolent relative who, being himself a man of learning and taste, discerned in the child the signs of precocious distinction, and placed within reach of his exquisite perception the fruit of his own researches and labors. Mr. Forbes inhabited one of those fresh and green little spots of suburban London in the immediate neighborhood of the celebrated school of Harrow, where two illustrious men were to challenge at a farther period the lively admiration of your colleague. One of these was the greatest of modern English poets; the other the most distinguished English statesman of his day; and both of them had just about that time finished their studies.

Excluded from Harrow by his age and creed, the young Montalembert often

passed his mornings in an establishment of more modest pretensions, where he was sent, not to commence his "classes," following the consecrated expression of our own educational customs, but to practically learn life and labor in community with others.

There were then, besides her great educational foundations, two kinds of schools in England. In one of these was combined an independence which astonishes us with a discipline which would appear cruel, inspiring the child at a very early age with the sentiment of responsibility, and the habits of freedom, as well as of submission to authority, unmixed with a particle of servility. In the other, the want of proper supervision, added to motives of sordid economy, gave rise to abuses which have been happily done away with; but of which the lively imagination of a celebrated writer of fiction, Mr. Charles Dickens, influenced by bitter recollections, has left us some striking pictures. It was one of those contrasts which we sometimes encounter in England, and which would shock us the more if we did not see them disappear day by day, and if the attentive observer did not remark with what perseverance that great, happy, and free country applies itself to reform what is bad without destroying what is good.

The house at Fulham, situated on the pleasant banks of the Thames, bore no resemblance whatever to the schools described by Dickens. Montalembert remained in it only for a short period, but sufficiently long to retain the most useful impressions of his stay, and amongst these a lasting knowledge of the English language, which he wrote and spoke with correctness and facility.

A thunder stroke interrupted these early essays in public education. The old man who had been the guide and friend of the child expired in his arms in the room of a country inn. It was Montalembert's first acquaintance with grief; it was for him the first of those surprises with which death visits us so unsparingly, without ever finding us prepared to receive them.

A long-enough period passed away before the Fulham schoolboy was subjected to the rule of a college. Private lessons, studies which seemed above his years, with some travelling, filled up the six years which the old French system consecrates

to assiduous methodical labor, according to a regular fixed programme. The experiment succeeded, thanks to a rare disposition and exceptional capacity, as well as to the strength of the principles which had been already graven in this young and excellent heart; and when he became, in his seventeenth year, a pupil of the College of Sainte Barbe (now the Collège Rollin), he began by winning distinction at the general entrance examination. Resolved on achieving excellence in his "Humanity" course, he devoted not alone to literary and philosophic reading what we should call the regular hours of study, although he pursued those studies conscientiously. Following submissively our university discipline, he continued, nevertheless, the habit of private reading which he had learned from his intercourse with the English and German schools, and which had been confirmed by the lessons he had received from eminent professors.

Open the collection of letters which he wrote at seventeen years of age to a fellow-pupil, and you will see the plan of reading which he adopted to make his vacation pass agreeably, and to which he adhered with a marvellous exactness and constancy.

At the head of his list of studies you will find the Greeks and Latins, the *Odyssey* and Pliny's Letters, the *chef-d'œuvre* of French prose, 'Les Provinciales'; then come in order those English poets whom he cherished, and to whom he was attached by his early souvenirs. Follow the revelations of this young soul, which opens and pours itself out in its daily correspondence. Friendship still suffices to nourish the tenderness of his heart; and how he speaks of it! How charmed is he when he meets De Thou devoting himself to Cinq-Mars, when he hears the dreamer Posa speaking to Don Carlos, or the melancholy Moore singing the woes of Green Erin! See him seizing all those passing, often vaguely passing, forms; giving them substance, and identifying himself with the pictures where he finds their spirit concentrated on friendship, country, liberty, and faith.

In these letters we discern the orator and politician making combined efforts, and preparing for the future career of both. Not alone do the debates of our chambers occupy his attention—not an unusual thing at a period when political indifference had not as yet tainted the

youth of our country; but what was extraordinary, and what I believe will ever be so, was to see a college lad in his holidays take up for his amusement a volume of De Lolme and the Reports of the English Parliament. There we find him retracing to their highest sources the principles of constitutional liberty and parliamentary eloquence. In such intellectual pursuits he forgets his gun and his horse, takes his solitary walk in the country, and declaims as he goes along.

"Often," he writes, "in the midst of a wood, I commence an extempore tirade against the Ministry, when, with my short sight, I stumble against some woodcutter or peasant, who looks at me in utter wonder, and takes me beyond doubt for a runaway from some madhouse. As for me, I am instantly covered with shame, and take to my legs as fast as they can carry me. Then, after the lapse of a few minutes, I began to gesticulate and declaim once more." In his enthusiasm he would fancy the great Bishop of Meaux in the midst of a parliamentary conflict, and he would cry out, "Bossuet to the tribune!" What a spectacle!

Among the models which he studied there was one above all others who carried him along with his march of eloquence; it was Grattan. The fiery and impassioned style of this tribune of the people elevated into a veritable enthusiasm the somewhat vague sentiment with which Moore had inspired Montalembert. He was in love with Ireland; he wished to write her history from 1688, after a plan which he had conceived in his eighteenth year, and in which he had before him the double object which he was to pursue all his life.

"I wish, said he, "to present to France the example of a nation which has lost its liberty by its complaisance for the throne, and to render justice to Catholicism in unfolding the picture of the virtues, especially the patriotism, which it has engendered in Ireland."

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If from his youthful starting point M. de Montalembert was firm in his principles, and saw clearly the object he had proposed to attain, as well as the disappointments and perils which were to meet him on his way, still was he uncertain as to the route which he ought to follow. Shall you be surprised, gentlemen, if I re-

mind you that his first literary attempt was not a book, as he had at first intended, but a controversial article in a periodical? M. de Montalembert was more a man of his time than he believed himself. He loved the Press; and he proved for it that irresistible passion which is a characteristic of our own days. He feared its excess; he blamed it severely; he had not always cause to be pleased with it personally. He always came back to it, however; and in allusion to it he repeated this verse of an amorous elegy of Ovid:

"Nec sine te, nec tecum vivere possum."

It was after his return from Sweden, where he had been to pass one of his vacations, always working ones, with his father, that he offered his first tribute to the inconstant. Having seen seated on the throne of that country a French soldier whom the Revolution had elevated to it, and who seemed to him to be too much attached to prerogatives of recent origin, and too unmindful of the political and religious liberties of his people, he published an attack on the government of Charles XIV., which an excellent judge (M. Guizot) thought excessive, proceeding from the son of the minister who represented France at Stockholm. Rendered somewhat cool by this reception of his first literary essay, and beginning to think seriously of pursuing a military career, he hesitated amidst several plans; sometimes allured by the warlike instincts of his race towards the French army, which was then about to land on that shore where St. Louis had died; sometimes attracted towards Ireland by the dreams of his youth and his cherished passion to serve the persecuted Church. The hope of taking part in a modern crusade bore his spirit back to the Holy Wars; and he hastened to offer his services to O'Connell. He had taken perhaps an exaggerated measure of the Liberator's views; but, in any case, O'Connell seems not to have understood him; and his Irish journey was only productive of a protest against an oppression which had lasted for ages, but which was just at that moment brought to an end.

Otherwise, France was now about to open a much wider field to his enthusiasm; the domain of public discussion was enlarged; the fire of controversy,

already animated, burned up with greater animation; the Revolution of July had just been accomplished. It answered in certain ways the liberal views and aspirations of M. de Montalembert; it shocked in other points the traditions of his family; it alarmed his faith; it made him anxious for the future. Liberty had made a step in advance, but her march was not of that kind which the young mind of your colleague had dreamed of; it was not the lesson he had received from the English Constitution. With the natural impetuosity of his age, and the peculiar warmth of his heart, he pictured to himself a sombre future—we may call it a dream—in which he saw those interests which he held most dear completely sacrificed; administrative despotism holding the place of royal authority more firmly fixed than ever; public careers and employment, especially that of the army, closed against the military families of old France; the Church oppressed, if not persecuted; the Charter, only promulgated yesterday, already disowned; because public teaching, not as yet emancipated, still continued under the yoke of the University.

This state of mind and heart, in some measure chimerical, could not long remain passive nor rest satisfied in a nature like Montalembert's, with a vague inquietude and a barren sorrow. He resolved to resist what he considered a tyranny, to defend the Church, to march direct for the liberty of public teaching. He found at once a chief and an ally with whom to commence the combat. Two men, as wide as the poles asunder, and reserved for very different destinies, were then advancing on the same route, with the same object in view. One of these had been as yet unknown, a young advocate of the Dijon bar, with talents which displayed in abundance the sparkle and piquancy of his native province, and a heroic spirit which breathed at first a thorough and devoted faith in the Republic, but which had been about this period touched at length with grace. The other was a priest of Brittany, already a celebrity, attached until then to Absolutist theories, a rival of M. de Maistre, hard and obstinate; but, to make use of Bossuet's expression, he was one whom grace had not abandoned altogether. Gentlemen, I allude to Lacordaire and Lamennais. Montalembert formed an intimate alliance with these

two men; they founded a journal; they would open a school of liberal politics, and engage in a contest in which the two younger members of the triumvirate looked forward perhaps to encountering something of peril, but in which they must only learn that a government has no more power to dispense with the execution of the law than it has to violate it. The opening of the school of the Rue Jacob was an inoffensive act; but it was an illegal one. It was shut up, and M. de Montalembert, the death of whose father had just summoned him to the Upper Chamber, asserted his right to plead his own cause before the Court of Peers. This was his début in the art in which he was destined to excel. He astonished and delighted his auditors by the fervor of his discourse, the originality of his views, the boldness of his conceptions, tempered all through by a certain dignity of expression; and that could be repeated of him which had been said of Burke, and which he himself reiterated later on of Donoso Cortes, "*He darted into fame!*" At the first bound, he won renown.

The effect was extraordinary, and it would have been still more so, if other more burning questions had not attracted public attention; if other more serious agitations had not troubled the country; if even this contest had confined itself to the limits of the press or been satisfied with the just sense of the nation. When, however, the indulgent sentence of the Court of Peers had been passed, the actors in the dispute disappeared from the stage. The most august of judges interfered, and summoned the case before a tribunal which the founders of the *Avenir* had not the right to refuse. They crossed the mountains.

A painful debate, obscured by what was to most observers an impenetrable veil, kept the young peer of France a good many years from the Chamber. Here he seemed only to have taken his place, that he might exchange his senatorial chair for the stool of a culprit. We now see him submitting to a sovereign arbitrator before whom he rather bows as a suppliant than stands up as a pleader. We see him awaiting with pious anxiety a sentence which is not to look for an earthly sanction. His soul is profoundly troubled; its props are wanting; his friends are disunited. At one time he

obeys the imperious dictates of duty, at another he yields to the influences of impassioned affection, indefatigable in his efforts to prevent a rupture which his spirit could well foresee, but which his heart would not accept.

When at length the dénouement took place—and it was the more solemn and decisive from the fact that the Roman Court had retarded it so long—Montalembert found himself separated from Lacordaire by the grate of the cloister, and from Lamennais by a gulf still more difficult to pass. There could no longer be any community of action between human pride and the submission of a Christian.

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Montalembert's opinions on Art were the result of studies as choice as they were complete; and he has expressed them with such verve and originality, that you will permit me to dwell on them for a moment.

It was under the Christian form that the Beautiful attracted the eye, and took possession of the spirit of this believer. It was to this form that he boldly and unreservedly applied the laws and rules of æsthetics.

His admiration taking him back to the far distant past, he crossed the boundaries which few less spiritual judges had yet approached, and which still fewer will ever venture to pass over. He went back, and declared for the period which the Italians then called the *tempi bassi*—they have changed their opinion a little since then—and whilst this contemptuous definition was still in general acceptance among the majority of critics, he discerned, before the general taste had begun to modify itself, the merits and declared himself in favor of the Primitives; for that, I believe, is their actual designation.

His heart, as an artist, was in Sienna. There he was at home, on the Piazza della Signora, facing the many stories of fortified palaces, or under the arcades of the incomparable cathedral, standing in rapt contemplation before a painting of Sodoma, or of some fresh and pure and brilliant fresco of Pinturicchio; or he would be turning over the leaves of the manuscripts illustrated by those miniaturists who never since their time have had a rival. At every step he met one or other of the *chefs-d'œuvre* collected together in this quaint and charming city,

where the memories of the old Italian republics come back upon you, and even the ruined walls preserve as yet the traces of the heroic siege sustained by Blaise de Montluc and his companions, when they defended against the Imperialists this last bulwark of the municipal and national franchises of the Middle Ages.

Florence, even Rome herself, approached still less than Sienna the ideal of Montalembert. At Florence, of course, he found Dante, and catching the Danteistic tone for the moment, like many others, he was on the point of writing a commentary; a sad error, from which, however, his good star preserved him. There, too, he found Giotto, to whom he preferred Giotto—I know not wherefore—Fra Angelico, Simon Memmi, and a host of others. To hear him speak, however, the Medicis had spoiled everything. At Rome, the sentiments of the submissive son of the Church somewhat spoiled the freer appreciations of the critic. The ruins of monuments erected by the Cæsars had no attraction for him, unless purified by the blood of the martyrs; and the moment which, for most people, marked the apogee of Christian art, was, in his eyes, the commencement of its decline. And thus even Raphael, in his third style and manner, was looked upon by him as a fallen angel. He did not understand Michael Angelo. Correggio was a materialist; and I need scarcely add that for him the Bolognese school had no existence. I cannot forget the mishap of an amateur of my acquaintance who did his best to make him admire a Venus of Annibal Carracci. If the subject of the painting was objectionable to Montalembert, the name of the painter was much more so. Nothing could change his feelings in the matter; not even the testimony in its favor of Bellori, who had described this picture as an eminent work; nor yet the remark that the master had, in this instance at least, thrown aside his vulgarity and his ordinary coldness; that his picture was full of life and animation; that it was colored like a Veronese. It was all in vain; nobody must speak of the Venetians to your illustrious colleague, unless they belonged to the Bellini family, or could attach to their name the epithet of "Quattrocentisto." Even Titian was condemned. The amateur at last ad-

duced an argument which he thought must prove irresistible: the picture had been painted for a cardinal! I dare not tell you, gentlemen, how this assertion was received; but certainly the word "pagan" was pronounced. M. de Montalembert took an independent view of the opinions and conduct of the clergy, when dogma and faith were not wound up in the question, and especially as regarded questions of Art. Thus he was one of the first, one of the most vehement, to reproach our venerable and patriotic clergy of France with the state of disgraceful abandonment in which our ecclesiastical monuments were so long left, or the little care or intelligence which had been bestowed upon their preservation. It is true that this censure had something to say to certain Gallican traditions in the system of restoration or mutilation inaugurated in the sixteenth century, and continued to the epoch when your lamented colleague wrote and spoke so much in favor of a movement which had been set on foot to re-establish mediæval institutions. In that campaign he marched alongside the Romantiques, without, however, completely mixing himself up with them—not so much an *adepte* as a rival of him who had so valiantly led their van, the illustrious author of 'Notre Dame de Paris.' In fact, by the generality of his opinions, he approached closely to that living member of your Institute, whom I am entitled by right to call the first of our art critics.

And the contest was a lasting one. Even after the great successes achieved by the historians, by the Romantiques, by the critics, Montalembert continued on the watch. Everywhere he discovered new misdeeds amongst them, and held them up to public indignation.

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It was, in fact, as an orator of the Opposition that Montalembert had reappeared in the Chamber of Peers, and for ten years not unfrequently he made his appearance in the tribune, not to sustain a war of principles against the cabinets which succeeded each other during that period, but in obedience to his independent instincts, which urged him to criticise certain acts of the administration and certain tendencies of parties in power. Such displays he chose his own time to make, without personal views or party

spirit; indeed, without any view whatever, but to express his honest personal opinion.

There are two kinds of eloquence, observes Cicero; one which instructs, which persuades by a train of deep and subtle reasoning; another, which inflames by its passion and influences by its power. Amongst the moderns, those who have bestowed most attention upon the art of public speaking are the English. Taking up the definition of Cicero, and expressing it with that energetic conciseness of which their language has the secret, and which defies translation, the English divide into two classes the men who occupy between them the domain of eloquence. I do not speak of the men of the tribune, for there is no tribune in the venerable halls of Westminster, but of those who conduct the public business of their country in the British Parliament. The *debater* is he who can discuss, who above all things is a reasoner; the *orator* is he who hurries you along much more than he persuades you. Montalembert was an orator.

Even beyond the arena of parliamentary conflict, I do not believe it was possible to hear him at a *réunion*, or to converse with him for any length of time, without being struck with his greatness and elevation of mind, his vivid sense of the picturesque, his intuitive appreciation of the sublime and commanding in expression, his happy introduction of the *imprevu* or *unexpected* at the right moment, the peculiar stamp, altogether, with which his brilliant conversation, like a highly-finished medal, was impressed. And his conversation, as well as his writings, always took the oratorical turn. It was his distinctive *trait* as a writer, and would have been almost considered a literary fault, if the felicity of his language and the elevation of his sentiments did not cause the reader to forget the superabundant rhetorical display in which he sometimes indulged. His was the periodic style, which he would seem to abuse, if it had been otherwise than natural. So natural was it, that no one was wearied with its repetition. Cicero censured the Romans who wrote their speeches after having delivered them, not as they should be delivered—*habite jam, non ut habeantur**—a reproach which modern speakers

are not open to in general, and which could not be applied to M. de Montalembert in particular. Assuredly he was not one of those orators who can speak, but who cannot write. And if he prepared some of his speeches, the brilliancy and power which he displayed in his replies prove how well he could depend on himself for an extempore effort when he ascended the tribune. He even occasionally, in the midst of one of his thoroughly premeditated, perhaps written discourses, improvised so successfully, being well enabled to do so by his genius and acquirements, that it was impossible for his auditors to detect the joint, or discover the cementing between the new casting and the old.

* * * * *

Sober in action, with a voice at once lofty and penetrating, vibrating like that one particular voice which vibrates through our national assembly, a voice which at first astonishes, but before long excites and carries us along; with a clear blue eye, as clear and as bright as his own thoughts; with a countenance so calm as never to betray the slightest reflection of the internal fire which animated his discourse—such was, if I mistake not, Montalembert in the tribune.

When I look around me, gentlemen, I ask myself, how it has come to my lot to retrace for you the portrait of an orator; but the subject leaves me no choice. I continue.

It was said of him that he was the tribune of the aristocracy; and Lacordaire reproached him one day with wishing to bring back the old *régime*. "Why so?" he replied. "Do I accuse you of wishing to bring back the Inquisition because you have taken the habit of Saint Dominic?"

No, he was not a tribune; for he did not lower himself to the meanness of seeking applause either within the walls of Parliament or without. Neither fearing to run foul of the prejudices of one set of men, nor provoking the hostility of another, he gave warm expression to what he felt and thought, without shrinking from or softening down the truth of what he wished to convey. "Even scandal," he used to say, "is preferable to falsehood!" No, he did not waste his spirit in vain regrets for a past which could never be recalled. He never indulged in the chimerical dream of the return of the

* Cicero's 'Brutus,' xxiv.

old régime. He never gave aristocratic government a thought, unless it was to study its early import, and trace its elements in our history. It was not equality which he opposed. He was against equality in abasement. "I believe," he said, "in the right, in man's worth, the worth of the independent honest man. I am for the equality which would enable this independent honest man to be counted upon; which allows him to count himself as something; which encourages him, even at his risk and peril, to make head against falsehood and evil, against prerogative and faction. I am for the equality which, in order that you may get on in the world and win distinction, or even gain a living, does not compel you to cringe to those in power, or to truckle to those who labor for their overthrow, to crouch to an individual or a mob, to be passing for ever from the conspirators' club to the antechamber of the minister. Such is my political creed."

Certainly, looking through the political discourses of Montalembert, and especially reviewing the one which he delivered before you in the January of 1852, we shall find many severe strictures upon the French Revolution. He had no pity for the men who bear with affection the yoke after having broken the chain. The greatest of their crimes was their having disenchanted the world from liberty, their having compromised, or shaken, or crushed in honest hearts this noble faith; their having rolled back upon its sources the tide of human destinies.

Well, gentlemen, Montalembert resisted this disenchantment, which he painted with such bitterness of sorrow, all the while regretting that France had not followed the example of England, and initiated the movement of 1688, which was "the necessary and sanctioned consequence of her national Constitution." He proclaimed that "our society, the offspring, as it was, of the Revolution, and modelled and fashioned by thirty-five years of ordered liberty, notwithstanding its miseries, its mistakes, its obscurations, and its inconsistencies, was more estimable, and contained more genuine worth than the French society of one hundred and fifty years ago."

A sort of mirage caused him to review the Middle Ages as a period invested with liberties, the sources of which he be-

lieved could be traced to a far-off past. Of those the one which he considered the most precious, I should almost say the foundation of all the others, was the liberty of the Church. He also entertained not less determined views in favor of preserving inviolate such little States as the fortune of war or diplomatic prudence had interspersed on the map of Europe between the larger empires. He believed that the separate and independent maintenance of these communities would serve as a safeguard to the public peace, and would guarantee, with peace, the civilizing progress of the nations—a questionable theory, by the way, which could not stand against accomplished facts. It was one, however, which had at least the merit of having been for a long period the policy of France, and had been adopted and sustained by statesmen of the most liberal views and of the highest eminence. This policy M. de Montalembert advocated unreservedly. It was this double current of ideas which often carried him along in a contrary sense to the course observed and followed by many great European nations. He was not less the champion of generous views as regards the independence of nations, even when he was thought to be opposed to that glorious Italian movement, the dawn of which he had been one of the first to hail and welcome. He had words of sympathy for Venice; and willingly did he repeat the old burden of, "Give an obolus to the poor afflicted of the Adriatic!" He never forgot Poland. He was ever in front of the crusade against slavery; and in one of his latest writings he celebrated with poetic enthusiasm the final victory of the Northern States of America, and the triumph of those free institutions, the origin of which was mixed up with the last glories of the old French monarchy.

His liberal principles were confirmed by the strength of his religious convictions. His religion being always *hors de cause*, he expressed his political views with a resolution which might have exhibited a shade of doubt, if coming from a less confident Catholic. I have seen him on his return to France on one occasion, full of sympathy and admiration, when the Scottish Presbyterians had just separated from the Old Kirk, and covered the country in all directions with the new temples constructed in the course of a few

months. The noble efforts which an honest zeal had caused those rich, but, generally speaking, economical Calvinists to make, were spoken of by Montalembert in terms of the warmest praise; but it was with absolute enthusiasm that he spoke of the humble sacrifices made every Sunday by the poor and improvident Irish, the accumulated results of which in collected halfpence built those magnificent cathedrals which are the pride and ornament of their country.

His respect was as great as his praise was unreserved for every generous and sincere conviction. Persecution of every kind filled him with indignation, no matter who was the victim or who the persecutor. He held the memory of the St. Bartholomew in equal horror with that of the September massacres. He bowed in homage to the Catholic missionary who braved the stake and rack for his faith; and, repeating a beautiful expression of Pierre de Blois, he saluted with honor the Huguenot who resisted tyranny with the sacrifice of his life. Conversing with him one day on the great events of the sixteenth century, I blamed Coligny for having been, according to my opinion, too ready to begin the civil war. Montalembert's answer was to take down from the library-shelf a volume of D'Aubigné, from which with singular impressiveness he read the old story of that nocturnal debate between the admiral and his wife, in which the former, stirred up by the sobbing of the latter, points out to her the difficulties of the struggle against "the possessors of an old established and firmly rooted state," the certain perils, "the nakedness, the starvation in a foreign land, the felon's death, the heritage of infamy to children degraded"—in which the wife listening to nothing but "that cry of her people, then mounting up to heaven, reminds the husband that he carries a sword, the sword of a gentleman, to rescue the afflicted from the claws of tyranny!" The admiral, carried along by the appeal, mounts his horse at the dawn of day. "Was he wrong," cried Montalembert, "in believing that he should become guilty of the murder of all those whom he would not save from being murdered?"

The last time I had the opportunity of seeing him was at Rixenstart, an ancient country residence of his in Brabant, in

the midst of that Belgian land which he loved, because it was Catholic and liberal, and to which he was attached by the most tender relations. During a period of more than thirty years he had experienced the love and friendship of a companion whose heart and intelligence were in every way worthy of him. The pride and delight of his home, adorning it with every grace and virtue, she was a consolation to him in his affliction, which she soothed by her tender cares and devoted attentions. His marriage with this lady had allied him to one of those old Walloon families, compatriots of Commynes and Froissart, whose generous traditions attach them to the provinces united of old under the sceptre of the Dukes of Burgundy. The name of Merode traces back to the earliest pages of Belgian history, and has ever borne a distinguished place in our assemblies. Rixenstart was the home of the Merodes.

It was there that I saw the dear and illustrious invalid, as he lay upon the bed from which he was to rise no more, with his long white beard flowing round his noble face, and his fine voice as animated as ever, as indignant against wrong, as enthusiastic for right, chiding the scepticism of some, regretting the apathy of others. It had, however, a tone which was new to me. It had in it something indescribable of the indulgent and the majestic, with the serenity of the Christian who knows that his hours are numbered, and who sees without dismay the moment when he must meet his Creator. It was then that I thought of the saying of Bossuet, "that a heroic soul is mistress of the body which she animates." * * * *

I cannot sit down without saying a word about 'The Monks of the West,' for this is the work *par excellence* of your illustrious colleague. He commenced it in his youth, and he was laboring upon it when death summoned him away. * * *

In 'The Monks,' a work upon which he had long meditated, and which was the fruit of the most profound studies, he presents to the reader a picture of the social renovation of the world, a chapter in the history of civilization, the history, indeed, of civilization herself; and he might have taken for its epigraph the judgment inscribed in the *Journal des Savants* by one of your most eminent colleagues (M. Littré), that "the great agent

of social safety during the fifth, sixth, and seventh centuries was the Church. * * *

His principal object throughout his great work, and we can trace it through its minutest details, is to demonstrate the civilizing agency of the Church. These were the sources of the liberty which he sought, and which perhaps he viewed through an exaggerated medium. His is the grave tone of the historian. Titus Livius is his model; a well-chosen one, where the subject touches, though slightly, upon the legend sometimes, even where the author seeks to maintain the severity of history. In other respects he draws gravely upon the old legend. He selects from it with discernment; he does not disguise it; he presents it with a symbolic character: as, for example—

“Roaming one day through the environs of Subiaco, Saint Benoit met one of his brethren, a barbarian convert, lamenting by the side of the lake for the loss of his scythe, which had just fallen into the water. At the command of the saint the waters rendered back the implement at the feet of the brother. ‘Take up your blade,’ said Saint Benoit to him, ‘work, and be not disheartened’—*Ecce, labora, et noli contristari*.” * * *

Do not these words remind you of the stern saying of the Emperor Severus (*Laboremus*), which a great, wise, and virtuous citizen, whose name is doubly dear, repeated within these walls? Is it not the same thought presented under a gentler guise, under a less stoical and more Christian form? It is almost one of those devices which Montalembert loved to collect and scatter broadcast through his works and correspondence, ever varying the expression to suit the occasion. He had one which belonged to his family. I found it under his old coat of arms. *Ne espoir, ne peur*. Fear was a word which had no meaning for a heart like his. The hope which his ancestors repudiated was unhealthy ambition, and the thirst for honors at any price. This is

not the noble passion which Christianity has made a virtue. Montalembert's courage was not of the passive kind. His disinterestedness was not devoid of hope.

Gentlemen, it was at a time of discouragement, under a darkened sky, in the middle of the sad fifteenth century, that age of blood and iron, which could not be said to belong to modern times, and which no longer belonged to those poetic Middle Ages so loved by Montalembert, when the Cross disappeared from the banks of the Bosphorus, when the King of France, bereft of reason and dethroned, was replaced in Paris by a foreign prince, when every scourge, every kind of war devastated our country—the English invasion, the black plague, the Jacquery, the Great Companies—it was at that time that one of my ancestors, a younger son of a royal race, gave to his companions for their rallying cry this single word, *ESPERANCE!* Montalembert, too, hoped always. He knew not our supreme tribulations or the extremity of our grief. His last days were disturbed by the anxieties which he felt for the peace of the Church; but his steadfast faith reassured him thoroughly. He feared nothing for Catholic unity, and he died without knowing that it was the unity of his country—alas! which was about to be stricken down. Had he lived on to the period of our great misfortunes, he would have been reminded once more of Saint Benoit and the convert of Subiaco; and I think I hear him saying, “Take up the fragment of thy broken sword, poor France! Staunch thy wounds! Work, and be not disheartened! *Labora, et noli contristari!*” And with that grand and powerful voice of his, which, even when altered during his sufferings, had a far nobler resonance than the feeble one which now addresses you, he would repeat the rallying cry which the Bourbon raised on the morrow of Agincourt, the cry of France, the Christian cry of *ESPERANCE!*—*Temple Bar*.

A ROMAN FUNERAL.

WE are so accustomed to bury our dead that it is only by an effort that we can conceive of ourselves as disposing of them otherwise. Yet the practice of

mankind has differed widely in this respect. And in every nation the traditional mode acquires a sanctity, from association with the most solemn and tender moments

of life, which induces us to look with horror on any alternative method. When Darius found an Indian tribe who ate the bodies of their dead, they were not less shocked at the idea of burning corpses than the Greeks in his train were at the horrible cannibalism of the Indians. Even when the breath has left the mortal frame, the cold remains of those we have loved are not less dear than when they were animated with life; but custom alone creates the direction in which that love manifests itself, and each direction is alike but an unavailing protest against the inexorable law which dissolves the ashes of the departed into fleeting gases and crumbling dust.

The Egyptians embalmed their dead. The Hebrews buried them out of their sight. The Greeks sometimes buried and sometimes burnt, the latter mode gaining the ascendancy as civilization advanced. The Persians, if we may trust the hints of earlier and the assertions of later writers, seem to have gathered their dead together on the top of a low building, and there left them to the birds and winds of heaven. Burying, burning, embalming, these are the three great alternatives adopted by humanity for the disposal of its dead. But there is scarcely any modification of these methods which has not found its adherents; and there is scarcely any conceivable substitute for them which has not been practised somewhere. The posture of burial has been varied, in many places it being thought decorous to bury in a sitting attitude. Some Red Indian tribes expose their dead on the branches of trees; the Ethiopians inclosed them in pillars of crystal. Maritime nations have sometimes honored their chiefs by laying them in state in a ship or canoe, and burning or setting it adrift. Sacred rivers are the chosen burial-ground of some: other commit their dead to the sea alone. Some leave the corpse till it decays, and then bury the bones: others remove the flesh from the bones immediately after death, and then dress and adorn the skeleton. Burial alive is by some thought a mark of affection: exposure to wild beasts is the chosen custom of by no means barbarous races. The Indian tribe above referred to finds many parallels. Nor was it always thought necessary to wait till death supervened. There is grim humor in the picture given

by Herodotus of a tribe where, when any one fell sick, "his chief friends tell him that the illness will spoil his flesh; and he protests that he is not unwell; but they not agreeing with him, kill and eat him." (Thalia, 99.) Horrors like these, however, can scarcely be classed among modes of sepulture; nor, perhaps, is it necessary to mention the tribes that *drink* their dead, having first reduced them to powder. Suffice it to say that there is no mode of disposing of dead bodies so singular, or so revolting, that it has not been adopted in good faith by some among the interminable varieties of savage races.

Among civilized nations, however, burial (under which we may include embalming) has divided with cremation the allegiance of custom. It would be improper to regard the first as the characteristic of Semitic, the second of Aryan races. For, though Lucian speaks of burial as the mark of barbarians, burning of Greeks, it is beyond question that burial remained to the last an alternative in Greece and Rome. It would rather appear that burial is the first rude suggestion of decency, prompting the mourner to lay the dead body reverently away rather than leave it to moulder unheeded; and that as burial is recognized to be incomplete, embalming and cremation are the two alternatives suggested. The Egyptians regarded fire as a wild beast; and, as Herodotus tells us, they preferred embalming to allowing the bodies to be torn by beasts or consumed by worms. The Greeks preferred the alternative of speedy destruction. Cremation was with them, though not the universal, the solemn and honorable form of sepulture. A corpse cast up by the sea might be buried by a benevolent passer-by (three handfuls of dust were held equivalent to burial, and laid the weary ghost); in time of danger, or for want of means, a body might be committed to the earth. But mourning friends who wished to do the last sad honors to the deceased followed him to his funeral pyre, and cherished the ashes which survived the flame in vases of costly make. It may be interesting, therefore, to set before our eyes what precisely passed on such an occasion. When our elder brethren, Greeks or Romans, lost a friend, with what sad ceremonies did they take their leave of him! For clearness' sake, let us confine

ourselves to the better known nation. Let the scene be Rome, in the early days of the empire.

It is a week since Caius Cornelius Scipio died. He lies in state in the hall of his house on the Palatine, one of the last family mansions left on the hill, which the emperor wants to make entirely his own. He lies in the great hall, where the statues of his ancestors look down on him who has at last become one of them—gone over to the majority. His son Lucius knelt at his bedside when he breathed his last; kissed him a moment before death, to catch the last faint breath. From the finger he drew his ring, which has now been replaced in view of the approaching funeral. The relatives who stood in the room raised a loud cry of grief, in the vain hope of recalling the sleeper if he were but in a trance; a cry which has become historical as a sign that all is over—*conclamatum est*. Still he slept unmoved, and while notice was sent to the undertakers, the household attendants washed the body with warm water, and then handed it over to the professional ministers. These bathed it with sweet-smelling unguents, removing all that savored of sickness or death, and attired the corpse in garments suitable to his high position, the *toga prætecta* covering in death him who had worn it in life. A small coin was placed in the mouth, in accordance with immemorial custom, to pay for his ferrying over the dark river. The crown which had been given him, like our Victoria Cross, for bravery on the field of battle, adorned the pale brows. And so, calm and stately, he was laid in the great ancestral hall; flowers and green leaves were strewn around, and a branch of cypress planted beside the entrance door, a signal of invitation to his friends, and of warning to those whom religious considerations forbade to enter the house where a dead body lay. For seven days his sorrowing clients, those whom he had shielded in his day of power, and friends who had loved him well, have flocked in to pay the last tribute of respect, and gaze once more on the well-known face; and now in the bright morning sunshine, they are going to carry him beyond the precincts of the city, to reduce the lifeless body to ashes, and deposit the remains in the sepulchre where stand the urns of the heroes of his race.

The herald has gone forth, to invite who

will to attend. For this is no ordinary man who is dead. Rome knew him well: and his family, we may be sure, will give him a funeral befitting his rank. Not at night will his burial be, like that of some poor plebeian who has gone the long journey; every solemnity that the servants of Libitina know will be lavished on his obsequies. From early morn the folk have been streaming to the door, clad in suits of customary black; the undertakers have been bustling about, and are now marshaling the splendid procession. Police officers are in attendance, to assist in maintaining order. The nearest relatives have gathered around the deceased. They lay him on his bier, no extravagant couch of ivory, as some who should have known better have lately begun to affect, but carved of dark wood, and stately with dark rich hangings, as befits a Roman citizen. And now at a given word these relatives lift the bier on to their shoulders, and the long procession files down the hill, and out to the place where the pyre is built, not far from the family burying-place.

The van is led by trumpeters, blowing a loud note of lamentation, and opening the way through the crowded streets near the Forum, to which their steps are first directed. Next come singing women, chanting in mournful strain the praises of the deceased. Yet a third band of hired attendants succeed, actors reciting appropriate sentiments from familiar poets, their chief also exhibiting in dumb show the actions which made the dead man famous. But who are these who follow now? Have the dead arisen to do him honor? There, large as life, walks the long line of noble ancestors whose blood flowed in the dead man's veins. Waxen masks, modelled on the busts which stand in the great hall, cover the faces of those selected to personate the heroes; each wears the robe he would have worn this day if the grave had given him up. It seems in truth as if all the mighty ones of his race, generals and statesmen, heroic names of Rome, have arisen to lead their descendant with welcome to his resting-place among them. Old stories of wars in Apulia and Samnium, with Gaul and Carthaginian, crowd on the beholder's mind. There goes he who was proudly styled "African," the conqueror of Hannibal, "great Scipio's self, that thunderbolt of war." There he who acquired a corresponding title from

his victories in Asia against Antiochus. There he who blent the elegance of Greek learning with the manly valor of Rome, the stern patriot who approved the slaying of his own usurping kinsmen, to whom a master-pen has lately given fresh immortality as the friend of Lælius. And many more, famous of old, and living still in the memories of men, mingle in this strange procession where the immortal dead do honor to their latest son.

Hitherto the procession has been wholly professional, not to say theatrical, in character. But these who come next recall the gazer to everyday life. For these are they who late were slaves, whom the liberality of the deceased has made free. Vulgar minds may ostentatiously manumit by will large numbers of slaves, swelling their funeral pomp at their heir's expense; but where no such sordid motive has directed the enfranchisement, who so fit to be there as they? Who have better right to walk, as they now walk, immediately before the bier?

In front of the bier they bear tables, inscribed with the deeds of the deceased, the laws he carried, the battles he fought. Captive banners and trophies of war are displayed; there is a map of some unknown land he conquered. All Rome may see to-day, if there be one here who needs the telling, how great a man is now being borne through the city he loved so well. Behind the bier come kinsmen and friends, women as well as men. The latter are dressed in black, as are all the professional assistants: the women wear white, a custom which, being somewhat novel in Rome, elicits a good deal of criticism. Bareheaded walk the women, with dishevelled hair and hands that beat their breasts; the male relatives, with an equal inversion of ordinary habits, have their heads closely veiled. Innumerable the crowd that follows. All Rome's best are there. The Senate have turned out to a man. Many who barely knew the deceased follow among his friends. Many join the procession out of mere curiosity, but most from a desire to pay this tribute of respect to one whom they have so long honored from afar.

And now they have reached the Forum. In the midst of this great space, the Westminster of Rome, the procession halts. The ancestors of the deceased seat themselves, in solemn semi-circle, on the ivory

chairs of the magistrates. In their midst his nephew, Publius, well known for his oratorical powers, ascends the rostra, and pronounces a long and labored panegyric over him who lies deaf and unheeding before him. He tells how his youth was devoted to study and martial exercise, not wasted on luxury and riotous living; how his manhood was spent in fighting Rome's battles abroad, and upholding order at home—an easy task now the might of the emperor has crushed all factious sedition. He speaks of his piety toward the gods, his love for his wife and children, his zeal on behalf of his clients, his kindness to all with whom he was brought into contact. In everything, he says, he lived worthy of his high lineage, worthy of those ancestors whose effigies are present beside him. And so the speaker is led to trace back the grand line of ancestors, and in kindling words remind his hearers of all the Scipios had done for Rome. What an Athenian audience felt when their orators recalled the names of those who fought at Marathon, that surely must a Roman audience have felt when they were reminded of the glories of the Scipios.

The bier is taken up, the procession is marshalled again. Through the bustling streets, out through the city gates, the famous Porta Capena, out on to the Appian Way, streams the long line of mourners. At the gate many generally leave the procession, but to-day they have but a short way further to go, for the tomb of the Scipios is not far beyond the gate, on the side of the Appian Way. The crowd therefore, pours out almost without diminution, till they reach a cleared spot not far from the tomb, whereon a great pile has been erected. Huge logs of wood form the body of the structure, interspersed with various inflammable substances; it stands four-square, like some gigantic altar to the unseen powers. A row of cypress trees, transplanted for the occasion, throws a gloomy shadow across it. The bier is placed on the top with all its splendid belongings. Ointments of the costliest description, spike-nard and frankincense, and all the strongest and sweetest-smelling unguents, are plentifully poured on the pile; Palestine and Syria, Arabia, Cilicia, have been laid under contribution. All is now ready, and as Lucius Scipio steps forward, the women raise a piercing wail. You may

see the tears in the young man's eyes, for his head is turned to us and away from the pile, as with trembling hand he applies a lighted torch. The flame mounts skyward with immense rapidity: huge swirls of smoke, pungent yet fragrant, sweep to leeward. As the fire reaches the body, the wailing of the women is redoubled. The men stand by in silence. No funeral games are exhibited to-day during the burning; nor do his relatives follow the somewhat barbarous custom of throwing in armor, clothes, and valuables to be consumed in the flames. The great crowd stands well-nigh motionless in genuine grief.

It does not take very long to reduce the whole to ashes. The pitch and resin, the rich unguents, all make the fire fierce and brief. A heap of mouldering embers is soon all that is left. The crowd melts away, while the relatives perform the remaining rites. The embers are quenched with wine, and a solemn invocation addressed to the soul of the departed. Those officiating then wash their hands with pure water, and proceed to gather the white calcined bones, easily distinguishable from the dark wood-ashes which cover them. These precious relics are solemnly sprinkled, first with wine, then with milk, dried with a linen cloth, and deposited in an alabaster urn. Perfumes are mingled with the ashes. The urn is then carried to the tomb, and deposited in the niche prepared for it. All round the walls you see similar urns, each in its own niche, each inscribed with a simple memento, like the inscriptions on our tombstones. All being now over, the family take their departure, with pious ejaculations and prayers for calm repose—"Sweet be the place of thy rest!" Outside the tomb, the priest sprinkles each of them thrice with pure water, to remove the pollution of the dead body, which was recognised by all nations of antiquity; and then dismisses them with the well-known formula, *Illicet*, ye may depart.

The family and relatives of the deceased make their way quietly home along the Appian Way, which is lined for a considerable distance with tombs like a suburban road with villas, and through the crowded streets, which have now resumed their usual aspect. On reaching the house they will be purified afresh by water and fire, being sprinkled with the one and made to

step over the other. For nine days they will then remain apart, mourning for the dead. On the expiry of that time a sacrifice will be offered to the gods below, and a great funeral feast will be given, at which all the guests will be dressed in white. Games, it may be, and shows of gladiators, will then be exhibited; food will be distributed to the populace. After that the family will return to their ordinary avocations: the men will not resume their mourning garb; the women will wear theirs for some time longer, the widow perhaps retaining hers for a year. But not for long will the dead man be forgotten; at intervals they will go to the tomb on the Appian Way, bearing flowers and perfumes to lay beside the ashes of the dear one gone. Lamps will be lighted there, to relieve the sepulchral gloom. And on stated occasions commemorative feasts will be held, where the family and friends will assemble, dressed in white, to do honor to the memory of the departed.

Such was a funeral in the old days of Rome. Of course only those of great men could be celebrated with all this pomp and splendor. The undertakers distinguished several kinds of funerals, and called each by an appropriate name. The obsequies of the poor were generally performed at night; and it seems probable that many bodies might be burned together on one common pyre. In the case of young persons, many of the ceremonies were dispensed with, and infants were not burned at all, but simply interred. Stringent but unavailing laws were made to repress the extravagance of funerals. The Twelve Tables allowed only ten musicians and three hired mourners, and forbade throwing perfume in the flames, or using gold in any way, it being even thought necessary to explain by a special statute that this prohibition did not apply to corpses whose teeth were stopped with gold! But so long as cremation was the popular form of burial, these sumptuary laws were in vain. With the introduction of Christianity the practice of cremation died out, and by the fourth century seems to have become quite extinct. This may have been partly owing to the Jewish origin of Christianity, but is probably in greater measure due to the widespread belief in an immediate Second Advent. Many if not all of the early Christians believed that the bodies which they com-

mitted to the earth would be raised and purified from the stains of mortality in the day of the Resurrection. It need hardly be said that this is in direct opposition to the teaching of First Corinthians chap. xv., where we are emphatically told that we do not know with what bodies the dead shall be raised. The experience of ages has taught men the true meaning of that sublime passage. Swift and sure is the decay of our mortal vestment, whether we commit it to the devouring flame or to the corrupting earth. A hundred years hence it will not matter which we choose. The atoms which have composed our body will have dissolved in a thousand directions, will have taken new forms, will have become part, it may be, of other organisms. That which we now call our body is made up of what in bygone ages may have been part of the body of our forefather. Nature is economic of her materials, and uses them many times. But the spiritual body

which we look to receive is different from the natural body. In the Resurrection they neither marry nor are given in marriage. The distinctions of mortality are lost: we have borne the image of the earthy, but then we shall bear the image of the heavenly. It doth not yet appear what we shall be; but at least we shall not be shut any more in this prison of the senses, hampered and fettered by bodily conditions. Secure in this belief, we contemplate without fear the inevitable dissolution of our decaying flesh; we watch its atoms lost in the ocean of matter, as our breath is lost in the ocean of air; for the physical laws by which this kaleidoscopic whirl of atoms and organisms is governed are but expressions of the will of Him who has promised an immortality of joy, nor hath it entered into the heart of man to conceive what He hath prepared for them that love Him.—*Macmillan's Magazine.*

TO CHARLES SUMNER.

IN MEMORIAM.

BY W. W. STORY.

For years, dear friend, but rarely had we met,
Fate in a different path our feet had set,
Space stretched between us, yet you still were near,
And friendship had no shadows of regret.

The ocean drear divided us, but nought
Obscured the interchange of word and thought;
The unbroken line of sympathy still throbbed,
And unto both its constant message brought.

And so I felt you were not far away,—
The mere material distance seemed to lay
Brief barrier to our meeting, and I dreamed
That some day we should meet; ay, any day—

That we again should clasp each other's hand,
Speak as of old, and face to face should stand;
Renew the past, and plot and plan again,
As in years past we plotted and we planned.

That hope is vanished now—a sudden change
Hath borne you from me far beyond the range
Of that familiar life that here we knew
Into a region dim and far and strange.

A vaster sea divides us now—a stretch
Across whose space we vainly strive to reach,

Whose deeps man passes never to return,
From whose far shores there comes no human speech.

In one swift moment you have passed and gone
Out on the blind way all must tread alone,
Unaccompanied, unfriended, none knows where,
Gone out into the vague and vast unknown.

Gone where no mortal sense can track your flight—
Gone where Faith casts a weak and wavering light,
Where trembling Hope and Fear bewildered stray,
Lost in the pathless silent shades of night.

Vanished for ever from this world away,
From all the accidents of Night and Day,
The season's chance and change, the voice of man,
And all Life's passion, joy, hope, pain, and play.

Gone in an instant like a breath of wind,
Leaving the dead dumb instrument behind
Through which the spirit, with such wondrous art,
Thrilled its fine harmonies of sense and mind.

Gone?—what is gone, and whither has it fled?
What means this dreadful utterance—he is dead!
What is this strange mysterious tie called Life,
That bindeth soul to sense by such slight thread?

Love's grasp is strong, and yet it could not hold
The somewhat that it loved; and thought is bold,
Yet strove in vain to follow where it fled,
And sank to earth, the secret all untold.

Where and what are you now? what do you know,
See, feel? Is all that was so dark below
Cleared up at last? Does memory still remain,
And do you long for us who loved you so?

In this new life does human feeling last?
Or has oblivion blotted out the Past,
All the glad joys of this warm life of sense,
And all the lights and shadows o'er it cast?

Or are you nothing now?—gone like a tone
That dies to silence—or a light that shone
One gleaming moment, swift to disappear,
By death's cold breath to utter darkness blown?

To all these questions comes a silence drear;—
Stretched o'er Life's utmost verge with longing ear
The still soul listens, but no answer comes
Save the low heart-beats of its hope or fear.

So we return to earth—we laugh and weep,
Love, hope, despair. Time in its silent sweep
Bears us along—till, tired out at last,
Gladly we lay us down in death's deep sleep.

No matter what it brings—at least it wears
 A peaceful charm of rest from all our cares.
 Why should we wish to toil and struggle more?
 Is not sleep sweet if no dark dreams it bears?

Look at this face where death has laid its hand,
 How calm it looks!—how sorrowless, how grand!
 Life's fever over, all the passions fled,
 All the lines smoothed they burned as with a brand.

Not Joy's glad smile in happiest hours it bore,
 Not Love's enchanted look that once it wore,
 Could lend a grace so noble, so refined,
 As now it wears when Joy and Love are o'er.

And yet—that peace will never soothe our pain;
 He whom we loved is lost. Come back again,
 Come back, we cry: no, never!—all our love
 And all our grief cry out for him in vain.

That pictured memory graced with treasures fair,
 That stored experience rich with learning rare,
 Those garnered thoughts and those affections fine—
 Are they all squandered, lost, dispersed in air?

Seek as you will—blind creature—never eye
 Of mortal man shall pierce this mystery.
 This, this alone we know, that nought we know;
 And yet we feel—life surely cannot die.

Change it may suffer—vanish from us here,
 In forms beyond our ken to reappear.
 Pass up the finite scale of seed, stalk, flower,
 To odor—then exhale beyond this sphere.

But death—blank nothing! at the very thought
 Reason recoils—Faith shudders—Hope, distraught,
 Reels back aghast; no wild imagining
 Can shape a shapeless empty void of naught.

To somewhat, vague and dim howe'er it be,
 The soul must cling—mere blank inanity
 Defies our utmost stretch of wildest thought,
 And here at least Hope, Reason, Faith agree.

Then why with nightmare dreams our spirits scare?
 If we will dream—how sweeter and more fair
 Hope's promise of a loftier life beyond,
 With larger loving and an ampler air!

Of vaster regions lifted from the sphere
 Of doubt and struggle that harass us here,
 Where the freed spirit, moving ever on,
 Breathes a diviner, purer atmosphere.

So will I dream, since nothing we can know,
 Your soul, enfranchised, wanders to and fro
 On some Elysian plain beyond our sense,
 Communing with great spirits as you go.

That oft a tender memory, turning, strays
To us who tread below these earthly ways,
Not mourning for us as we mourn for you,
But seeing clear above this cloudy maze.

That, purged of Time, your spirit larger grows
In that new being—asking not repose,
But with new aims and more expanded powers,
On, on, for ever with glad purpose goes.

And if 'tis all a dream—so let it be;
Who shall decide when all is mystery?
And yet I rather choose this heavenly dream
Than death's dark horror of inanity.

At least your noble thoughts can never die—
They live to stir and lift humanity—
They live to sweeten life and cheer us on:
If they are with us, surely you are nigh.

Yes, in our memory, long as sense remains,
That stalwart frame shall live, that voice whose strains
To lofty purpose pitched, struck like a fire
Into our blood, and thrilled through all our veins.

That full sonorous voice, whose high-strung key
Was tuned to Justice and to Liberty—
That sounded like a charge to rouse the world
From the deep slumber of its apathy.

Nor these alone;—we shall remember too
The kind familiar tones of love we knew,
The genial converse and the storied lore,
The cultured charm that every listener drew.

The gladsome smile, the gleam of quick surprise,
That thrilled the face and lightened through the eyes;
The uplifting brow, the utterance frank and clear,
And all that sullen death to sight denies.

Alas! how idle are the words we say!
How poor the tribute on your grave we lay
Nor praise nor blame shall cheer or trouble more
The parted spirit or the insensate clay.

Vain friendship's voice, and vain the loud lament!
A nation breathed as o'er your bier it bent;
Vain unto you, that as you passed away
A shadow darkened down a continent.

Rest, then, brave soldier, from the well-fought fight!
Rest, genial scholar, from the dear delight
Of arts and books! Rest, steadfast, stainless friend!
For ever ours—though lost to sense and sight.

Stern Duty's champion, at thy bier we bow!
Brave, honest, faithful to the end—thy vow
To God and Freedom kept—unbribed, unbought:
Rest thee—or rise to loftier labors now.—*Blackwood's Magazine.*

FAR FROM THE MADDING CROWD.

CHAPTER XXXIX.

COMING HOME: A CRY.

ON the turnpike-road, between Casterbridge and Weatherbury, and about a mile from the latter place, is one of those steep long ascents which pervade the highways of this undulating district. In returning from market it is usual for the farmers and other gig-gentry to alight at the bottom and walk up.

One Saturday evening in the month of October Bathsheba's vehicle was duly creeping up this incline. She was sitting listlessly in the second seat of the gig, whilst walking beside her in a farmer's marketing suit of unusually fashionable cut was an erect, well-made young man. Though on foot, he held the reins and whip, and occasionally aimed light cuts at the horse's ear with the end of the lash, as a recreation. This man was her husband, formerly Sergeant Troy, who, having bought his discharge with Bathsheba's money, was gradually transforming himself into a farmer of a spirited and very modern school. People of unalterable ideas still insisted upon calling him "Sergeant" when they met him, which was in some degree owing to his having still retained the well-shaped moustache of his military days, and the soldierly bearing inseparable from his form.

"Yes, if it hadn't been for that wretched rain I should have cleared two hundred as easy as looking, my love," he was saying. "Don't you see, it altered all the chances? To speak like a book I once read, wet weather is the narrative, and fine days are the episodes, of our country's history; now, isn't that true?"

"But the time of year is come for changeable weather."

"Well, yes. The fact is, these autumn races are the ruin of everybody. Never did I see such a day as 'twas! 'Tis a wild open place, not far from the sands, and a drab sea rolled in towards us like liquid misery. Wind and rain—good Lord! Dark? • Why, 'twas as black as my hat before the last race was run. 'Twas five o'clock, and you couldn't see the horses till they were almost in, leave alone colors. The ground was as heavy as lead, and all judgment from a fellow's

experience went for nothing. Horses, riders, people, were all blown about like ships at sea. Three booths were blown over, and the wretched folk inside crawled out upon their hands and knees; and in the next field were as many as a dozen hats at one time. Aye, Pimpernel regularly stuck fast when about sixty yards off, and when I saw Policy stepping on, it did knock my heart against the lining of my ribs, I assure you, my love!"

"And you mean, Frank," said Bathsheba, sadly—her voice was painfully lowered from the fullness and vivacity of the previous summer—"that you have lost more than a hundred pounds in a month by this dreadful horseracing? Oh, Frank, it is cruel; it is foolish of you to take away my money so. We shall have to leave the farm; that will be the end of it!"

"Humbug about cruel. Now, there 'tis again—turn on the water-works; that's just like you."

"But you'll promise me not to go to Budmouth races next week, won't you?" she implored. Bathsheba was at the full depth for tears, but she maintained a dry eye.

"I don't see why I should; in fact, if it turns out to be a fine day, I was thinking of taking you."

"Never, never! I'll go a hundred miles the other way first. I hate the sound of the very word!"

"But the question of going to see the race or staying at home has very little to do with the matter. Bets are all booked safely enough before the race begins, you may depend. Whether it is a bad race for me or a good one, will have very little to do with our going there next Monday."

"But you don't mean to say that you have risked anything on this one too!" she exclaimed, with an agonised look.

"There now, don't you be a little fool. Wait till you are told. Why, Bathsheba, you've lost all the pluck and sauciness you formerly had, and upon my life if I had known what a chicken-hearted creature you were under all your boldness, I'd never have—I know what."

A flash of indignation might have been seen in Bathsheba's dark eyes as she looked resolutely ahead after this reply. They moved on without further speech, some early-withered leaves from the beech-trees which hooded the road at this spot occasionally spinning downward across their path to the earth.

A woman appeared on the brow of the hill. The ridge was so abrupt that she was very near the husband and wife before she became visible. Troy had turned towards the gig to remount, and whilst putting his foot on the step the woman passed behind him.

"Though the overshadowing trees and the approach of eventide enveloped them in gloom, Bathsheba could see plainly enough to discern the extreme poverty of the woman's garb, and the sadness of her face.

"Please, sir, do you know at what time Casterbridge Union-house closes at night?"

The woman said these words to Troy over his shoulder.

Troy started visibly at the sound of the voice; yet he seemed to recover presence of mind sufficient to prevent himself from giving way to his impulse to suddenly turn and face her. He said slowly—

"I don't know."

The woman, on hearing him speak, quickly looked up, examined the side of his face, and recognised the soldier under the yeoman's garb. Her face was drawn into an expression which had gladness and agony both among its elements. She uttered a hysterical cry, and fell down.

"Oh, poor thing!" exclaimed Bathsheba, instantly preparing to alight.

"Stay where you are, and attend to the horse!" said Troy, peremptorily, throwing her the reins and the whip. "Walk the horse to the top: I'll see to the woman."

"But I——"

"Do you hear? Clk—Poppet!"

The horse, gig, and Bathsheba moved on.

"How on earth did you come here? I thought you were miles away, or dead! Why didn't you write to me?" said Troy to the woman, in a strangely gentle, yet hurried voice, as he lifted her up.

"I feared to."

"Have you any money?"

"None."

"Good Heaven—I wish I had more to give you! Here's—wretched—the merest

trifle. It is every farthing I have left. I have none but what my wife gives me, you know, and I can't ask her now."

The woman made no answer.

"I have only another moment," continued Troy; "and now listen. Where are you going to-night? Casterbridge Union?"

"Yes; I thought to go there."

"You shan't go there: yet, wait. Yes, perhaps for to-night; I can do nothing better—worse luck. Sleep there to-night, and stay there to-morrow. Monday is the first free day I have; and on Monday morning at ten exactly meet me on Casterbridge Bridge. I'll bring all the money I can muster. You shan't want—I'll see that, Fanny; then I'll get you a lodging somewhere. Good-bye till then. I am a brute—but good-bye!"

After advancing the distance which completed the ascent of the hill, Bathsheba turned her head. The woman was upon her feet, and Bathsheba saw her withdrawing from Troy, and going feebly down the hill. Troy then came on toward his wife, stepped into the gig, took the reins from her hand, and without making any observation whipped the horse into a trot. He was rather pale.

"Do you know who that woman was?" said Bathsheba, looking searchingly into his face.

"I do," he said, looking boldly back into hers.

"I thought you did," said she, with angry hauteur, and still regarding him. "Who is she?"

He suddenly seemed to think that frankness would benefit neither of the women.

"Nothing to either of us," he said. "I know her by sight."

"What is her name?"

"How should I know her name?"

"I think you do."

"Think if you will and be ——." The sentence was completed by a smart cut of the whip round Poppet's flank, which caused the animal to start forward at a wild pace. No more was said.

CHAPTER XL.

ON CASTERBRIDGE HIGHWAY.

FOR a considerable time the woman walked on. Her steps became feebler, and she strained her eyes to look afar upon

the naked road, now indistinct amid the penumbrae of night. At length her onward walk dwindled to the merest totter, and she opened a gate within which was a haystack. Underneath this she sat down and presently slept.

When the woman awoke it was to find herself in the depths of a moonless and starless night. A heavy unbroken crust of cloud stretched across the sky, shutting out every speck of heaven; and a distant halo which hung over the town of Casterbridge was visible against the black concave, the luminosity appearing the brighter by its great contrast with the circumscribing darkness. Towards this weak, soft glow the woman turned her eyes.

"If I could only get there!" she said. "Meet him the day after to-morrow: God help me! Perhaps I shall be in my grave before then."

A clock from the far depths of shadow struck the hour, one, in a small, attenuated tone. After midnight the voice of a clock seems to lose in breadth as much as in length, and to diminish its sonorousness to a thin falsetto.

Afterwards a light—two lights—arose from the remote shade, and grew larger. A carriage rolled along the road, and passed the gate. It probably contained some late diners-out. The beams from one lamp shone for a moment upon the crouching woman, and threw her face into vivid relief. The face was young in the groundwork, old in the finish; the general contours were flexuous and child-like, but the finer lineaments had begun to be sharp and thin.

The pedestrian stood up, apparently with a revived determination, and looked around. The road appeared to be familiar to her, and she carefully scanned the fence as she slowly walked along. Presently there became visible a dim white shape; it was a milestone. She drew her fingers across its face to feel the marks.

"Three!" she said.

She leant against the stone as a means of rest for a short interval, then bestirred herself, and again pursued her way. For a lengthy distance she bore up bravely, afterwards flagging as before. This was beside a lone hazel copse, wherein heaps of white chips strewn upon the leafy ground showed that woodmen had been faggoting and making hurdles during the day. Now there was not a rustle, not a breeze,

not the faintest clash of twigs to keep her company. The woman looked over the gate, opened it, and went in. Close to the entrance stood a row of faggots, bound and unbound, together with stakes of all sizes.

For a few seconds the wayfarer stood with that tense stillness which signifies itself to be not the end, but merely the suspension, of a previous motion. Her attitude was that of a person who listens, either to the external world of sound, or to the imagined discourse of thought. A close criticism might have detected signs proving that she was intent on the latter alternative. Moreover, as was shown by what followed, she was oddly exercising the faculty of invention upon the specialty of the clever Jacquet Droz, the designer of automatic substitutes for human limbs.

By the aid of the Casterbridge aurora, and by feeling with her hands, the woman selected two sticks from the heaps. These sticks were nearly straight to the height of three or four feet, where each branched into a fork like the letter Y. She sat down, snapped off the small upper twigs, and carried the remainder with her into the road. She placed one of these forks under each arm as a crutch, tested them, timidly threw her whole weight upon them—so little that it was—and swung herself forward. The girl had made for herself a material aid.

The crutches answered well. The pat of her feet, and the tap of her sticks upon the highway, were all the sounds that came from the traveller now. She had passed a second milestone by a good long distance, and began to look wistfully towards the bank as if calculating upon another milestone soon. The crutches, though so very useful, had their limits of power. Mechanism only transmutes labor, being powerless to abstract it, and the original quantum of exertion was not cleared away; it was thrown into the body and arms. She was exhausted, and each swing forward became fainter. At last she swayed sideways, and fell.

Here she lay, a shapeless heap, for ten minutes and more. The morning wind began to boom dully over the flats, and to move afresh dead leaves which had lain still since yesterday. The woman desperately turned round upon her knees, and next rose to her feet. Steadying herself by the help of one crutch she essayed

a step, then another, then a third, using the crutches now as walking-sticks only. Thus she progressed till the beginning of a long railed fence came into view. She staggered across to the first post, clung to it, and looked around. Another mile-stone was on the opposite side of the road.

The Casterbridge lights were now individually visible. It was getting towards morning, and vehicles might be hoped for if not expected soon. She listened. There was not a sound of life save that acme and sublimation of all dismal sounds, the bark of a fox, its three hollow notes being rendered at intervals of a minute with the precision of a funeral bell.

"One mile more," the woman murmured. "No, less," she added, after a pause. "The mile is on the Town Hall, and my resting-place is on this side Casterbridge. Three-quarters of a mile, and there I am!" After an interval she again spoke. "Five or six steps to a yard—six perhaps. I have to go twelve hundred yards. A hundred times six, six hundred. Twelve times that. O pity me, Lord!"

Holding to the rails she advanced, thrusting one hand forward upon the rail, then the other, then leaning over it whilst she dragged her feet on beneath.

This woman was not given to soliloquy; but extremity of feeling lessens the individuality of the weak, as it increases that of the strong. She said again in the same tone, "I'll believe that the end lies five posts forward, and no further, and so get strength to pass them."

This was a practical application of the principle that a half feigned and factitious faith is better than no faith at all.

She passed five posts, and held on to the fifth.

"I'll pass five more by believing my longed-for spot is at the next fifth. I can do it."

She passed five more.

"It lies only five further."

She passed five more.

"But it is five further."

She passed them.

"The end of these railings is the end of my journey," she said, when the end was in view.

She crawled to the end. During the effort each breath of the woman went into the air as if never to return again.

"Now for the truth of the matter," she

said, sitting down. "The truth is, that I have less than half a mile." Self-beguilement with what she had known all the time to be false had given her strength to come a quarter of a mile that she would have been powerless to face in the lump. The artifice showed that the woman, by some mysterious intuition, had grasped the paradoxical truth that blindness may operate more vigorously than prescience, and the short-sighted effect more than the far-seeing; that limitation, and not comprehensiveness, is needed for striking a blow.

The half-mile stood [now] before the sick and weary woman like a stolid Juggernaut. It was an impassive King of her world. The road here ran across a level plateau with only a bank on either side. She surveyed the wide space, the lights, herself, sighed, and lay down on the bank.

Never was ingenuity exercised so sorely as the traveller here exercised hers. Every conceivable aid, method, stratagem, mechanism, by which these last desperate eight hundred yards could be overpassed by a human being unperceived, was revolved in her busy brain, and dismissed as impracticable. She thought of sticks, wheels, crawling—she even thought of rolling. But the exertion demanded by either of these latter two was greater than to walk erect. The faculty of contrivance was worn out. Hopelessness had come at last.

"No further!" she whispered, and closed her eyes.

From the stripe of shadow on the opposite side of the way a portion of shade seemed to detach itself and move into isolation upon the pale white of the road. It glided noiselessly towards the recumbent woman.

She became conscious of something touching her hand; it was softness and it was warmth. She opened her eyes, and the substance touched her face. A dog was licking her cheek.

He was a huge, heavy, and quiet creature, standing darkly against the low horizon, and at least two feet higher than the present position of her eyes. Whether Newfoundland, mastiff, bloodhound, or what not, it was impossible to say. He seemed to be of too strange and mysterious a nature to belong to any variety among those of popular nomenclature.

Being thus assignable to no breed he was the ideal embodiment of canine greatness—a generalisation from what was common to all. Night, in its sad, solemn, and benevolent aspect, apart from its stealthy and cruel side, was personified in this form. Darkness endows the small and ordinary ones among mankind with poetical power, and even the suffering woman threw her idea into figure.

In her reclining position she looked up to him just as in earlier times she had, when standing, looked up to a man. The animal, who was as homeless as she, respectfully withdrew a step or two when the woman moved, and, seeing that she did not repulse him, he licked her hand again.

A thought moved within her like lightning. "Perhaps I can make use of him—I might do it then!"

She pointed in the direction of Casterbridge, and the dog seemed to misunderstand: he trotted on. Then, finding she could not follow, he came back and whined.

The ultimate and saddest singularity of woman's effort and invention was reached when, with a quickened breathing, she rose to a stooping posture, and, resting her two little arms upon the shoulders of the dog, leant firmly thereon, and murmured stimulating words. Whilst she sorrowed in her heart she cheered with her voice, and what was stranger than that the strong should need encouragement from the weak was that cheerfulness should be so well simulated by such utter dejection. Her friend moved forward slowly, and she with small mincing steps moved forward beside him, half her weight being thrown upon the animal. Sometimes she sank as she had sunk from walking erect, from the crutches, from the rails. The dog, who now thoroughly understood her desire and her incapacity, was frantic in his distress on these occasions; he would tug at her dress and run forward. She always called him back, and it was now to be observed that the woman listened for human sounds only to avoid them. It was evident that she had an object in keeping her presence on the road and her forlorn state unknown.

Their progress was necessarily very slow. They reached the brow of the hill, and the Casterbridge lamps lay beneath them like fallen Pleiads as they walked

down the incline. Thus the distance was passed, and the goal was reached. On this much desired spot outside the town rose a picturesque building. Originally it had been a mere case to hold people. The shell had been so thin, so devoid of excrescence, and so closely drawn over the accommodation granted that the grim character of what was beneath showed through it, as the shape of a body is visible under a winding sheet.

Then Nature, as if offended, lent a hand. Masses of ivy grew up, completely covering the walls, till the place looked like an abbey; and it was discovered that the view from the front, over the Casterbridge chimneys, was one of the most magnificent in the county. A neighboring earl once said that he would give up a year's rental to have at his own door the view enjoyed by the inmates from theirs—and very probably the inmates would have given up the view for his year's rental.

This green edifice consisted of a central mass and two wings, whereon stood as sentinels a few slim chimneys, now gurgling sorrowfully to the slow wind. In the middle was a gate, and by the gate a bell-pull formed of a hanging wire. The woman raised herself as high as possible upon her knees, and could just reach the handle. She moved it and fell forwards in a bowed attitude, her face upon her bosom.

It was getting on towards six o'clock, and sounds of movement were to be heard inside the building which was the haven of rest to this wearied soul. A little door in the large one was opened, and a man appeared inside. He discerned the panting heap of clothes, went back for a light, and came again. He entered a second time and returned with two women.

These lifted the prostrate figure and assisted her in through the door-way. The man then closed the door.

"How did she get here?" said one of the women.

"The Lord knows," said the other.

"There is a dog outside," murmured the overcome traveler. "Where is he gone? He helped me."

"I stoned him away," said the man.

The little procession then moved forward—the man in front bearing the light, the two bony women next, supporting between them the small and supple one.

Thus they entered the door and disappeared.

CHAPTER XLII.

SUSPICION: FANNY IS SENT FOR.

BATHSHEBA said very little to her husband all that evening of their return from market, and he was not disposed to say much to her. He exhibited the unpleasant combination of a restless condition with a silent tongue. The next day, which was Sunday, passed nearly in the same manner as regarded their taciturnity, Bathsheba going to church both morning and afternoon. This was the day before the Budmuth races. In the evening Troy said suddenly,

"Bathsheba, could you let me have twenty pounds?"

Her countenance instantly sank. "Twenty pounds?" she said.

"The fact is, I want it badly." The anxiety upon Troy's face was unusual and very marked. It was a culmination of the mood he had been in all the day.

"Ah! for those races to-morrow."

Troy for the moment made no reply. Her mistake had its advantages to a man who shrank from having his mind inspected as he did now. "Well, suppose I do want it for races?" he said, at last.

"Oh, Frank!" Bathsheba replied, and there was such a volume of entreaty in the words. "Only such a few weeks ago you said that I was far sweeter than all your other pleasures put together, and that you would give them all up for me; and now, won't you give up this one, which is more a worry than a pleasure? Do, Frank. Come, let me fascinate you by all I can do—by pretty words and pretty looks, and everything I can think of—to stay at home. Say yes to your wife—say yes!"

The tenderest and softest phases of Bathsheba's nature were prominent now—advanced impulsively for his acceptance, without any of the disguises and defences which the wariness of her character when she was cool too frequently threw over them. Few men could have resisted the arch yet dignified entreaty of the beautiful face, thrown a little back and sideways in the well-known attitude that expresses more than the words it accompanies, and which seems to have been designed for these special occasions. Had the woman not been his wife Troy would have suc-

cumbed instantly; as it was, he thought he would not deceive her longer.

"The money is not wanted for racing debts at all," he said.

"What is it for?" she asked. "You worry me a great deal by these mysterious responsibilities, Frank."

Troy hesitated. He did not now love her enough to allow himself to be carried too far by her ways. Yet it was necessary to be civil. "You wrong me by such a suspicious manner," he said. "Such strait-waistcoating as you treat me to is not becoming in you at so early a date."

"I think that I have a right to grumble a little if I pay," she said, with features between a smile and a pout.

"Exactly; and, the former being done, suppose we proceed to the latter. Bathsheba, fun is all very well but don't go too far, or you may have cause to regret something."

She reddened. "I do that already," she said, quickly.

"What do you regret?"

"That my romance has come to an end."

"All romances end at marriage."

"I wish you wouldn't talk like that. You grieve me to my soul by being smart at my expense."

"You are dull enough at mine. I believe you hate me."

"Not you—only your vices. I do hate them."

"'Twould be much more becoming if you set yourself to cure them. Come, let's strike a balance with the twenty pounds, and be friends."

She gave a sigh of resignation. "I have about that sum here for household expenses. If you must have it, take it."

"Very good. Thank you. I expect I shall have gone away before you are in to breakfast to-morrow."

"And must you go? Ah! there was a time, Frank, when it would have taken a good many promises to other people to drag you away from me. You used to call me darling, then. But it doesn't matter to you how my days are passed now."

"I must go, in spite of sentiment," Troy, as he spoke, look at his watch, and, apparently actuated by *non lucendo* principles, opened the case at the back, revealing, snugly stowed within it, a small coil of hair.

Bathsheba's eyes had been accidentally

lifted at that moment, and she saw the action, and saw the hair. She flushed in pain and surprise, and some words escaped her before she had thought whether or not it was wise to utter them. "A woman's curl of hair!" she said. "Oh, Frank, whose is that?"

Troy had instantly closed his watch. He carelessly replied, as one who cloaked some feelings that the sight had stirred. "Why, yours, of course. Whose should it be? I had quite forgotten that I had it."

"What a dreadful fib, Frank!"

"I tell you I had forgotten it!" he said, loudly.

"I don't mean that—it was yellow hair."

"Nonsense."

"That's insulting me. I know it was yellow. Now whose was it? I want to know."

"Very well—I'll tell you, so make no more ado. It is the hair of a young woman I was going to marry before I knew you."

"You ought to tell me her name, then."

"I cannot do that."

"Is she married yet?"

"No."

"Is she alive?"

"Yes."

"Is she pretty?"

"Yes."

"It is wonderful how she can be, poor thing, under such an awful affliction."

"Affliction—what affliction?" he enquired, quickly.

"Having hair of that dreadful color."

"Oh—ho—I like that!" said Troy, recovering himself. "Why, her hair has been admired by everybody who has seen her since she has worn it loose, which has not been long. It is beautiful hair. People used to turn their heads to look at it, poor girl!"

"Pooh! that's nothing—that's nothing!" she exclaimed, in incipient accents of pique. "If I cared for your love as much as I used to I could say people had turned to look at mine."

"Bathsheba, don't be so fitful and jealous. You knew what married life would be like, and shouldn't have entered it if you feared these contingencies."

Troy had by this time driven her to bitterness: her heart was big in her throat, and the ducts to her eyes were painfully

full. Ashamed as she was to show emotion, at last she burst out:—

"This is all I get for loving you so well! Ah! when I married you your life was dearer to me than my own. I would have died for you—how truly I can say that I would have died for you! And now you sneer at my foolishness in marrying you. Oh! is it kind to me to throw my mistake in my face? Whatever opinion you may have of my wisdom, you should not tell me of it so mercilessly, now that I am in your power."

"I can't help how things fall out," said Troy; "upon my heart, women will be the death of me!"

"Well, you shouldn't keep people's hair. You'll burn it, won't you, Frank?"

Frank went on as if he had not heard her. "There are considerations even before my consideration for you; reparation to be made—ties you know nothing of. If you repent of marrying, so do I."

Trembling now, she put her hand upon his arm, saying, in mingled tones of wretchedness and coaxing, "I only repent it if you don't love me better than any woman in the world. I don't otherwise, Frank. You don't repent because you already love somebody better than you love me, do you?"

"I don't know. Why do you say that?"

"You won't burn that curl. You like the woman who owns that pretty hair—yes; it is pretty—more beautiful than my miserable black mane! Well, it is no use; I can't help being ugly. You must like her best, if you will!"

"Until to-day, when I took it from a drawer, I have never looked upon that bit of hair for several months—that I am ready to swear."

"But just now you said 'ties;' and then, that woman we met?"

"'Twas the meeting with her that reminded me of the hair."

"Is it hers, then?"

"Yes. There, now that you have wormed it out of me, I hope you are content."

"And what are the ties?"

"Oh! that meant nothing—a mere jest."

"A mere jest!" she said, in mournful astonishment. "Can you jest when I am so wretchedly in earnest? Tell me the truth, Frank. I am not a fool, you know,

although I am a woman, and have my woman's moments. Come! treat me fairly," she said, looking honestly and fearlessly into his face. "I don't want much; bare justice—that's all. Ah! once I felt I could be content with nothing less than the highest homage from the husband I should choose. Now, anything short of cruelty will content me. Yes! the independent and spirited Bathsheba is come to this!"

"For Heaven's sake don't be so desperate!" Troy said, snappishly, rising as he did so, and leaving the room.

Directly he had gone, Bathsheba burst into great sobs—dry-eyed sobs, which cut as they came, without any softening by tears. But she determined to repress all evidences of feeling. She was conquered; but she would never own it as long as she lived. Her pride was indeed brought low by despairing discoveries of her spoliation by marriage with a less pure nature than her own. She chafed to and fro in rebelliousness, like a caged leopard; her whole soul was in arms, and the blood fired her face. Until she had met Troy, Bathsheba had been proud of her position as a woman; it had been a glory to her to know that her lips had been touched by no man's on earth—that her waist had never been encircled by a lover's arm. She hated herself now. In those earlier days she had always nourished a secret contempt for girls who were the slaves of the first good-looking young fellow who should choose to salute them. She had never taken kindly to the idea of marriage in the abstract as did the majority of women she saw about her. In the turmoil of her anxiety for her lover she had agreed to marry him; but the perception that had accompanied her happiest hours on this account was rather that of self-sacrifice than of promotion and honor. Although she scarcely knew the divinity's name, Diana was the goddess whom Bathsheba instinctively adored. That she had never, by look, word or sign, encouraged a man to approach her—that she had felt herself sufficient to herself, and had in the independence of her girlish heart fancied there was a certain degradation in renouncing the simplicity of a maiden existence to become the humbler half of an indifferent matrimonial whole—were facts now bitterly remembered.

Oh, if she had never stooped to folly of this kind, respectable as it was, and could only stand again, as she had stood on the hill at Norcombe, and dare Troy or any other man to pollute a hair of her head by his interference!

The next morning she rose earlier than usual, and had the horse saddled for her ride round the farm in the customary way. When she came in at half-past eight—their usual hour for breakfasting—she was informed that her husband had risen, taken his breakfast, and driven off to Casterbridge with the gig and Poppet.

After breakfast she was cool and collected—quite herself, in fact—and she rambled to the gate, intending to walk to another quarter of the farm, which she still personally superintended as well as her duties in the house would permit, continually, however, finding herself preceded in forethought by Gabriel Oak, for whom she began to entertain the genuine friendship of a sister. Of course, she sometimes thought of him in the light of an old lover, and had momentary imaginings of what life with him as a husband would have been like; also of life with Boldwood under the same conditions. But Bathsheba, though she could feel, was not much given to futile dreaming, and her musings under this head were short and entirely confined to the times when Troy's neglect was more than ordinarily evident.

She saw coming up the hill a man like Mr. Boldwood. It was Mr. Boldwood. Bathsheba blushed painfully, and watched. The farmer stopped when still a long way off, and held up his hand to Gabriel Oak, who was in another part of the field. The two men then approached each other and seemed to engage in earnest conversation.

Thus they continued for a long time. Joseph Poorgrass now passed near them, wheeling a barrow of apples up the hill to Bathsheba's residence. Boldwood and Gabriel called to him, spoke to him for a few minutes, and then all three parted, Joseph immediately coming up the hill with his barrow.

Bathsheba, who had seen this pantomime with some surprise, experienced great relief when Boldwood turned back again. "Well, what's the message, Joseph?" she said.

He set down his barrow, and, putting

upon himself the refined aspect that a conversation with a lady required, spoke to Bathsheba over the gate.

"You'll never see Fanny Robin no more—use nor principal—ma'am."

"Why?"

"Because she's dead in the Union."

"Fanny dead—never!"

"Yes, ma'am."

"What did she die from?"

"I don't know for certain; but I should be inclined to think it was from general weakness of constitution. She was such a limbermaid that 'a could stand no hardship, even when I knowed her, and 'a went like a candle-snoff, so 'tis said. She was took bad in the morning, and, being quite feeble and worn out, she died in the afternoon. She belongs by law to our parish; and Mr. Boldwood is going to send a wagon this afternoon to fetch her home here and bury her."

"Indeed I shall not let Mr. Boldwood do any such thing—I shall do it. Fanny was my uncle's servant, and, although I only knew her for a couple of days, she belongs to me. How very, very sad this is!—the idea of Fanny being in a workhouse." Bathsheba had begun to know what suffering was, and she spoke with real feeling. . . . "Send across to Mr. Boldwood's, and say that Mrs. Troy will take upon herself the duty of fetching an old servant of the family. . . . We ought not to put her in a wagon; we'll get a hearse."

"There will hardly be time, ma'am, will there?"

"Perhaps not," she said musingly. "When did you say we must be at the door—three o'clock?"

"Three o'clock this afternoon, ma'am, so to speak it."

"Very well—you go with it. A pretty wagon is better than an ugly hearse, after all. Joseph, have the new spring wagon with the blue body and red wheels, and wash it very clean. And, Joseph."

"Yes, ma'am."

"Carry with you some evergreens and flowers to put upon her coffin—indeed, gather a great many, and completely bury her in them. Get some boughs of laurustinus, and variegated box, and yew, and boy's-love; ay, and some bunches of chrysanthemum. And let old Pleasant draw her, because she knew him so well."

"I will, ma'am. I ought to have said that the Union, in the form of four labor-

ing men, will meet me when I gets to our churchyard gate, and take her and bury her according to the rites of the Board of Guardians, as by law ordained."

"Dear me—Casterbridge Union—and is Fanny come to this!" said Bathsheba, musing. "I wish I had known of it sooner. I thought she was far away. How long has she lived there?"

"On'y been there a day or two."

"Oh!—then she has not been staying there as a regular inmate?"

"No. She's been picking up a living at seampstering in Melchester for several months, at the house of a very respectable widow-woman who takes in work of that sort. She only got handy the Union-house on Sunday morning 'a b'lieve, and 'tis supposed here and there that she had traipsed every step of the way from Melchester. Why she left her place I can't say, for I don't know; and as to a lie, why, I wouldn't tell it. That's the short of the story, ma'am."

"Ah-h!"

No gem ever flashed from a rosy ray to a white one more rapidly than changed the young wife's countenance whilst this word came from her in a long drawn breath. "Did she walk along our turnpike-road?" she said, in a suddenly restless and eager voice.

"I believe she did. . . . Ma'am, shall I call Liddy? You baint well, ma'am, surely? You look like a lily—so pale and faint!"

"No; don't call her; it is nothing. When did she pass Weatherbury?"

"Last Saturday night."

"That will do, Joseph; now you may go."

"Certainly, ma'am."

"Joseph, come hither a moment. What was the color of Fanny Robin's hair?"

"Really mistress, now that 'tis put to me so judge-and-jury-like, I can't call to mind, if ye'll believe me."

"Never mind; go on and do what I told you. Stop—well no, go on."

She turned herself away from him, that he might no longer notice the mood which had set its sign so visibly upon her, and went indoors with a distressing sense of faintness and a beating brow. About an hour after she heard the noise of the wagon and went out, still with a painful consciousness of her bewildered and troubled look. Joseph, dressed in his best suit of clothes, was putting in the horse to

start. The shrubs and flowers were all piled in the wagon, as she had directed. Bathsheba hardly saw them now.

"Whose sweetheart did you say, Joseph?"

"I don't know, ma'am."

"Are you quite sure?"

"Yes, ma'am, quite sure."

"Sure of what?"

"I am sure that all I know is that she arrived in the morning and died in the evening without further parley. What Oak and Mr. Boldwood told me was only these few words. 'Little Fanny Robin is dead, Joseph,' Gabriel said, looking in my face in his steady old way. I was very sorry, and I said, 'Ah!—and how did she come to die?' 'Well, she's dead in Casterbridge Union,' he said; 'and perhaps 'tisn't much matter about how she came to die. She reached the Union early Sunday morning, and died in the afternoon—that's clear enough.' Then I asked what she'd been doing lately, and Mr. Boldwood turned round to me then, and left off spitting a thistle with the end of his stick. He told me about her having lived by seampstering in Melchester, as I mentioned to you, and that she walked therefrom at the end of last week, passing near here Saturday night in the dusk. They then said I had better just name a hint of her death to you, and away they went. Her death might have been brought on by bidding in the night wind, you know, ma'am; for people used to say she'd go off in a decline: she used to cough a good deal in winter time. However, 'tisn't much odds to us about that now, for 'tis all over."

"Have you heard a different story at all?" She looked at him so intently that Joseph's eyes quailed.

"Not a word, mistress, I assure you," he said. "Hardly any body in the parish knows the news yet."

"I wonder why Gabriel didn't bring the message to me himself. He mostly makes a point of seeing me upon the most trifling errand." These words were merely murmured, and she was looking upon the ground.

"Perhaps he was busy, ma'am," Joseph suggested. "And sometimes he seems to suffer from things upon his mind connected with the time when he was better off than 'a is now. 'A's rather a curious item, but a very understanding shepherd, and learned in books."

"Did anything seem upon his mind whilst he was speaking to you about this?"

"I cannot but say that there did, ma'am. He was terrible down, and so was Farmer Boldwood."

"Thank you, Joseph. That will do. Go on now, or you'll be late."

Bathsheba, still unhappy, went indoors again. In the course of the afternoon she said to Liddy, who had been informed of the occurrence, "What was the color of poor Fanny Robin's hair? Do you know? I can not recollect—I only saw her for a day or two."

"It was light, ma'am; but she wore it rather short, and packed away under her cap, so that you would hardly notice it. But I have seen her let it down when she was going to bed, and it looked beautiful then. Real golden hair."

"Her young man was a soldier, was he not?"

"Yes. In the same regiment as Mr. Troy. He says he knew him very well."

"What, Mr. Troy says so? How came he to say that?"

"One day I just named it to him, and asked him if he knew Fanny's young man. He said, 'Oh yes, he knew the young man as well as he knew himself, and that there wasn't a man in the regiment he liked better.'"

"Ah! Said that, did he?"

"Yes, and he said there was a strong likeness between himself and the other young man, so that sometimes people mistook them—"

"Liddy, for Heaven's sake stop your talking!" said Bathsheba, with the nervous petulance that comes from worrying perceptions.

CHAPTER XLII.

JOSEPH AND HIS BURDEN: "BUCK'S HEAD."

A WALL bounded the site of Casterbridge Union-house, except along a portion of the end. Here a high gable stood prominent, and it was covered like the front with a mat of ivy. In this gable was no window, chimney, ornament, or protuberance of any kind. The single feature appertaining to it, beyond the expanse of dark green leaves, was a small door.

The situation of the door was peculiar. The sill was three or four feet above the ground, and for a moment one was at a

loss for an explanation of this exceptional altitude, till ruts immediately beneath suggested that the door was used solely for the passage of articles and persons to and from the level of a vehicle standing on the outside. Upon the whole, the door seemed to advertise itself as a species of Traitors' Gate translated to another element. That entry and exit hereby was only at rare intervals became apparent on noting that tufts of grass were allowed to flourish undisturbed in the chinks of the sill.

As the clock from the tower of St. George's Church pointed at three minutes to three, a blue spring wagon, picked out with red, and containing boughs and flowers, turned from the high road and halted on this side of the building. Whilst the chimes were yet stammering out a shattered form of "Malbrook," Joseph Poorgrass rang the bell, and received directions to back his wagon against the high door under the gable. The door then opened, and a plain elm coffin was slowly thrust forth, and laid by two men in fustian along the middle of the vehicle.

One of the men then stepped up beside it, took from his pocket a lump of chalk, and wrote upon the cover the name and a few other words in a large scrawling hand. (We believe that they do these things more tenderly now, and provide a plate.) He covered the whole with a black cloth, threadbare, but decent, the tail-board of the wagon was returned to its place, one of the men handed a certificate of registry to Poorgrass, and both entered the door, closing it behind them. Their connection with her, short as it had been, was over for ever.

Joseph then placed the flowers as enjoined, and the evergreens around the flowers, till it was difficult to divine what the wagon contained; he smacked his whip, and the rather pleasing funeral car crept up the hill, and along the road to Weatherbury.

The afternoon drew on apace, and, looking to the left towards the sea as he walked beside the horse, Poorgrass saw strange clouds and scrolls of mist rolling over the high hills which girt the landscape in that quarter. They came in yet greater volumes, and indolently crept across the intervening valleys, and around the withered papery flags of the sloughs and river brinks. Then their dank spongy forms closed in upon the sky. It was a sudden

overgrowth of atmospheric fungi which had their roots in the neighboring sea, and by the time that horse, man, and corpse entered Yalbury Great Wood, these silent workings of an invisible hand had reached them, and they were completely enveloped. It was the first arrival of the autumn fogs, and the first fog of the series.

The air was as an eye suddenly struck blind. The wagon and its load rolled no longer on the horizontal division between clearness and opacity. They were imbedded in an elastic body of a monotonous pallor throughout. There was no perceptible motion in the air, not a visible drop of water fell upon a leaf of the beeches, birches, and firs composing the wood on either side. The trees stood in an attitude of intentness, as if they waited longingly for a wind to come and rock them. A startling quiet overhung all surrounding things—so completely, that the crunching of the wagon-wheels was as a great noise, and small rustles, which had never obtained a hearing except by night, were distinctly individualised.

Joseph Poorgrass looked round upon his sad burden as it loomed faintly through the flowering laurustinus, then at the unfathomable gloom amid the high trees on each hand, indistinct, shadowless, and spectre-like in their monochrome of grey. He felt anything but cheerful, and wished he had the company even of a child or dog. Stopping the horse, he listened. Not a footstep or wheel was audible anywhere around, and the dead silence was broken only by a heavy particle falling from a tree through the evergreens and alighting with a smart rap upon the coffin of poor Fanny. The fog had by this time saturated the trees, and this was the first dropping of water from the overbrimming leaves. The hollow echo of its fall reminded the wagoner painfully of the grim Leveller. Then hard by came down another drop, then two or three. Presently there was a continual tapping of these heavy drops upon the dead leaves, the road, and the travellers. The nearer boughs were beaded with the mist to the greyness of aged men, and the rusty-red leaves of the beeches were hung with similar drops, like diamonds on auburn hair.

Situated by the roadside in the midst of this wood was the old inn, called "Buck's Head." It was about a mile and a half from Weatherbury, and in the meridian

times of stage-coach travelling had been the place where many coaches changed and kept their relays of horses. All the old stabling was now pulled down, and little remained besides the habitable inn itself, which, standing a little way back from the road, signified its existence to people far up and down the highway by a sign hanging from the horizontal bough of an elm on the opposite side of the way.

Travellers—for the variety *tourist* had hardly developed into a distinct species at this date—sometimes said in passing, when they cast their eyes up to the sign-bearing tree, that artists were fond of representing the sign-board hanging thus, but that they themselves had never before noticed so perfect an instance in actual working order. It was near this tree that the wagon was standing into which Gabriel Oak crept on his first journey to Weatherbury; but, owing to the darkness, the sign and the inn had been unobserved.

The manners of the inn were of the old-established type. Indeed, in the minds of its frequenters they existed as unalterable formulæ: e.g.—

Rap with the bottom of your pint for more liquor.

For tobacco, shout.

In calling for the girl in waiting, say, "Maid!"

Ditto for the landlady, "Old Soul!" etc. etc.

It was a relief to Joseph's heart when the friendly sign-board came in view, and, stopping his horse immediately beneath it, he proceeded to fulfill an intention made a long time before. His spirits were oozing out of him quite. He turned the horse's head to the green bank, and entered the hostel for a mug of ale.

Going down into the kitchen of the inn, the floor of which was a step below the passage, which in its turn was a step below the road outside, what should Joseph see to gladden his eyes but two copper-colored discs, in the form of the countenances of Mr. Jan Coggan and Mr. Mark Clark. These owners of the two most appreciative throats in the neighborhood, on this side of respectability, were now sitting face to face over a three-legged circular table, having an iron rim to keep cups and pots from being accidentally elbowed off; they

might have been said to resemble the setting sun and the full moon shining *vis-à-vis* across the globe.

"Why, 'tis neighbor Poorgrass!" said Mark Clark. "I'm sure your face don't praise your mistress's table, Joseph."

"I've had a very pale companion for the last five miles," said Joseph, indulging in a shudder toned down by resignation. "And to speak the truth, 'twas beginning to tell upon me. I assure ye I ha'n't seed the color of victuals or drink since breakfast time this morning, and that was no more than a dew-bit afield."

"Then drink, Joseph, and don't restrain yourself!" said Coggan, handing him a hooped mug three-quarters full.

Joseph drank for a moderately long time, then for a longer time, saying, as he lowered the jug, "'Tis pretty drinking—very pretty drinking, and is more than cheerful on my melancholy errand, so to speak it."

"True, drink is a pleasant delight," said Jan, as one who repeated a truism so familiar to his brain that he hardly noticed its passage over his tongue; and, lifting the cup, Coggan tilted his head gradually backwards, with closed eyes, that his expectant soul might not be diverted for one instant from its bliss by irrelevant surroundings.

"Well, I must be on again," said Poorgrass. "Not but that I should like another nip with ye; but the country might lose confidence in me if I was seed here."

"Where be ye trading o't to to-day then, Joseph?"

"Back to Weatherbury. I've got poor little Fanny Robin in my wagon outside, and I must be at the churchyard gates at a quarter to five with her."

"Ay—I've heard of it. And so she's nailed up in parish boards after all, and nobody to pay the bell shilling and the grave half-crown."

"The parish pays the grave half-crown, but not the bell shilling, because the bell's a luxury; but 'a can hardly do without the grave, poor body. However, I expect our mistress will pay all."

"A pretty maid as ever I see! But what's your hurry, Joseph? The pore woman's dead, and you can't bring her to life, and you may as well sit down comfortable and finish another with us."

"I don't mind taking just the merest

thimbleful of imagination more with ye, sonnies. But only a few minutes, because 'tis as 'tis."

"Of course, you'll have another drop. A man's twice the man afterwards. You feel so warm and glorious, and you whop and slap at your work without any trouble, and everything goes on like sticks a-breaking. Too much liquor is bad, and leads us to that horned man in the smoky house; but, after all, many people haven't the gift of enjoying a soak, and since we are highly favored with a power that way, we should make the most o't."

"True," said Mark Clark. "'Tis a talent the Lord has mercifully bestowed upon us, and we ought not to neglect it. But, what with the parsons and clerks and school-people and serious tea-parties, the merry old ways of good life have gone to the dogs—upon my carcase, they have!"

"Well, really, I must be onward again now," said Joseph.

"Now, now, Joseph; nonsense! The poor woman is dead, isn't she, and what's your hurry?"

"Well, I hope Providence won't be in a way with me for my doings," said Joseph, again sitting down. "I've been troubled with weak moments lately, 'tis true. I've been drinky once this month already, and I did not go to church a Sunday, and I dropped a curse or two yesterday; so I don't want to go too far for my safety. Your next world is your next world, and not to be squandered lightly."

"I believe ye to be a chapel-member, Joseph. That I do."

"Oh, no, no! I don't go so far as that."

"For my part," said Coggan, "I'm staunch Church of England."

"Ay, and faith, so be I," said Mark Clark.

"I won't say much for myself: I don't wish to," Coggan continued, with that tendency to talk on principles which is characteristic of the barley-corn. "But I've never changed a single doctrine: I've stuck like a plaster to the old faith I was born in. Yes, there's this to be said for the Church, a man can belong to the Church and bide in his cheerful old inn, and never trouble or worry his mind about doctrines at all. But to be a meetinger, you must go to chapel in all winds and weathers, and make yourself as frantic as a skit. Not but that chapel-members be

clever chaps enough in their way. They can lift up beautiful prayers out of their own heads, all about their families and shipwracks in the newspaper."

"They can—they can," said Mark Clark, with corroborative feeling; "but we Churchmen, you see, must have it all printed aforehand, or, dang it all, we should no more know what to say to a great person like Providence than babes unborn."

"Chapel-folk be more hand-in-glove with them above than we," said Joseph, thoughtfully.

"Yes," said Coggan. "We know very well that if anybody goes to heaven, they will. They've worked hard for it, and they deserve to have it, such as 'tis. I'm not such a fool as to pretend that we who stick to the Church have the same chance as they, because we know we have not. But I hate a fellow who'll change his old ancient doctrines for the sake of getting to heaven. I'd as soon turn king's evidence for the few pounds you get. Why, neighbors, when every one of my taties were frosted, our Parson Thirdly were the man who gave me a sack for seed, though he hardly had one for his own use, and no money to buy 'em. If it hadn't been for him, I shouldn't hae had a tatie to put in my garden. D'ye think I'd turn after that? No, I'll stick to my side; and if we be in the wrong, so be it: I'll fall with the fallen!"

"Well said—very well said," observed Joseph.—"However, folks, I must be moving now: upon my life I must. Parson Thirdly will be waiting at the church gates, and there's the woman a-biding outside in the wagon."

"Joseph Poorgrass, don't be so miserable! Parson Thirdly won't mind. He's a generous man; he's found me in tracts for years, and I've consumed a good many in the course of a long and rather shady life; but he's never been the man to complain of the expense. Sit down."

The longer Joseph Poorgrass remained, the less was his spirit troubled by the duties which devolved upon him this afternoon. The minutes glided by uncounted, until the evening shades began perceptibly to deepen, and the eyes of the three were but sparkling points on the surface of darkness. Coggan's watch struck six from his pocket in the usual still small tones.

At that moment hasty steps were heard

in the entry, and the door opened to admit the figure of Gabriel Oak, followed by the maid of the inn bearing a candle. He stared sternly at the one lengthy and two round faces of the sitters, which confronted him with the expressions of a fiddle and a couple of warming-pans. Joseph Poorgrass blinked, and shrank several inches into the background.

"Upon my soul, I'm ashamed of you; 'tis disgraceful, Joseph, disgraceful!" said Gabriel, indignantly. "Coggan, you call yourself a man, and don't know better than this!"

Coggan looked up indefinitely at Oak, one or other of his eyes occasionally opening and closing of its own accord, as if it were not a member but a dozy individual with a distinct personality.

"Don't take on so, shepherd!" said Mark Clark, looking reproachfully at the candle, which appeared to possess special features of interest for his eyes.

"Nobody can hurt a dead woman," at length said Coggan, with the precision of a machine. "All that could be done for her is done—she's beyond us: and why should a man put himself in a tearing hurry for lifeless clay that can neither feel nor see, and don't know what you do with her at all? If she'd been alive, I would have been the first to help her. If she now wanted victuals and drink, I'd pay for it, money down. But she's dead, and no speed of ours will bring her to life. The woman's past us—time spent upon her is thrown away: why should we hurry to do what's not required? Drink, shepherd, and be friends, for to-morrow we may be like her."

"We may," added Mark Clark, emphatically, at once drinking himself, to run no further risk of losing his chance by the event alluded to, Jan meanwhile merging his additional thoughts of to-morrow in a song:—

"To-mor-row, to-mor-row!
And while peace and plen-ty I find at my
board,
With a heart free from sick-ness and sor-
row,
With my friends will I share what to-day may
af-ford,
And let them spread the ta-ble to-mor-row.
To-mor-row, to-mor—"

"Do hold thy horning, Jan!" said Oak; and turning upon Poorgrass, "As for you, Joseph, who do your wicked deeds in such

confoundedly holy ways, you are as drunk as you can stand."

"No, Shepherd Oak, no! Listen to reason, shepherd. All that's the matter with me is the affliction called a multiplying eye, and that's how it is I look double to you—I mean you look double to me."

"A multiplying eye is a very distressing thing," said Mark Clark.

"It always comes on when I have been in a public-house a little time," said Joseph Poorgrass, meekly. "Yes, I see two of every sort, as if I were some holy man living in the times of King Noah and entering into the ark. . . . Y-y-y-yes," he added, becoming much affected by the picture of himself as a person thrown away, and shedding tears, "I feel too good for England: I ought to have lived in Genesis by rights, like the other men of sacrifice, and then I shouldn't have b-b-been called a d-d-drunkard in such a way!"

"I wish you'd show yourself a man of spirit, and not sit whining there!"

"Show myself a man of spirit? . . . Ah, well! let me take the name of drunkard humbly—let me be a man of contrite knees—let it be! I know that I always do say 'Please God' afore I do anything, from my getting up to my going down of the same, and I am willing to take as much disgrace as b-belongs to that holy act. Hah, yes! . . . But not a man of spirit? Have I ever allowed the toe of pride to be lifted against my person without shouting manfully that I question the right to do so? I enquire that query boldly!"

"We can't say that you have, Joseph Poorgrass," said Jan, emphatically.

"Never have I allowed such treatment to pass unquestioned! Yet the shepherd says [in the face of that rich testimony that I am not a man of spirit! Well, let it pass by, and death is a kind friend."

Gabriel, seeing that neither of the three was in a fit state to take charge of the wagon for the remainder of the journey, made no reply, but, closing the door again upon them, went across to where the vehicle stood, now getting indistinct in the fog and gloom of this mildewy time. He pulled the horse's head from the large patch of turf it had eaten bare, readjusted the boughs over the coffin, and drove along through the unwholesome night.

It had gradually become rumored in

the village that the body to be brought and buried that day was all that was left of the unfortunate Fanny-Robin who had followed the Eleventh from Casterbridge to Melchester. But, thanks to Boldwood's reticence and Oak's generosity, the lover she had followed had never been individualised as Troy. Gabriel hoped that the whole truth of the matter might not be published till at any rate the girl had been in her grave for a few days, when the interposing barriers of earth and time, and a sense that the events had been somewhat shut into oblivion, would deaden the sting that revelation and invidious remark would have for Bathsheba just now.

By the time that Gabriel reached the old manor-house, her residence, which lay in his way to the church, it was quite dark. A man came from the gate and said through the fog, which hung between them like blown flour,

"Is that Poorgrass with the corpse?"

Gabriel recognised the voice as that of the parson.

"The corpse is here, sir," said Gabriel.

"I have just been to inquire of Mrs. Troy if she could tell me the reason of the delay. I am afraid it is too late now for the funeral to be performed with proper decency. Have you the registrar's certificate?"

"No," said Gabriel. "I expect Poorgrass has that; and he's at the 'Buck's Head.' I forgot to ask him for it."

"Then that settles the matter. We'll put off the funeral till to-morrow morning. The body may be brought on to the church, or it may be left here at the farm and fetched by the bearers in the morning. They waited more than an hour, and have now gone home."

Gabriel had his reasons for thinking the latter a most objectionable plan, notwithstanding that Fanny had been an inmate of the farm-house for several years in the lifetime of Bathsheba's uncle. Visions of several unhappy contingencies which might arise from this delay flitted before him. But his will was not law, and he went indoors to enquire of his mistress what were her wishes on the subject. He found her in an unusual mood: her eyes as she looked up to him were suspicious and perplexed as with some antecedent thought. Troy had not yet returned. At first Bathsheba assented with a

mien of indifference to his proposition that they should go on to the church at once with their burden; but immediately afterwards, following Gabriel to the gate, she swerved to the extreme of solicitousness on Fanny's account, and desired that the girl might be brought into the house. Oak argued upon the convenience of leaving her in the wagon, just as she lay now, with her flowers and green leaves about her, merely wheeling the vehicle into the coach-house till the morning, but to no purpose. "It is unkind and unchristian," she said, "to leave the poor thing in a coach-house all night."

"Very well, then," said the parson. "And I will arrange that the funeral shall take place early to-morrow. Perhaps Mrs. Troy is right in feeling that we cannot treat a dead fellow-creature too thoughtfully. We must remember that though she may have erred grievously in leaving her home, she is still our sister; and it is to be believed that God's uncovenanted mercies are extended towards her, and that she is a member of the flock of Christ."

The parson's words spread into the heavy air with a sad yet unperturbed cadence, and Gabriel shed an honest tear. Bathsheba seemed unmoved. Mr. Thirdly then left them, and Gabriel lighted a lantern. Fetching three other men to assist him, they bore the unconscious truant indoors, placing the coffin on two benches in the middle of a little sitting-room next the hall, as Bathsheba directed.

Every one except Gabriel Oak then left the room. He still indecisively lingered beside the body. He was deeply troubled at the wretchedly ironical aspect that circumstances were putting on with regard to Troy's wife, and at his own powerlessness to counteract them. In spite of his careful manœuvring all this day, the very worst event that could in any way have happened in connection with the burial had happened now. Oak imagined a terrible discovery resulting from this afternoon's work that might cast over Bathsheba's life a shade which the interposition of many lapsing years might but indifferently lighten, and which nothing at all might altogether remove.

Suddenly, as in a last attempt to save Bathsheba from, at any rate, immediate anguish, he looked again, as he had looked before, at the chalk writing upon the

coffin-lid. The scrawl was this simple one, "*Fanny Robin and child.*" Gabriel took his handkerchief and carefully rubbed

out the two latter words. He then left the room, and went out quietly by the front door.

THE GREEK FOOL.

THE liveliest of living Greek professors is reported to have impressed on his junior class, upon a recent occasion, the trenchant dogma that "every person who despises the Greek language and literature proves himself to be a conceited puppy and an ignorant fool." It is odd enough that, by pursuing the opposite course to that which the professor deprecates, the student of Greek literature may make acquaintance with a hybrid between the fool and the puppy, nowhere found in such perfection as in the books of certain contributors to it. The simpleton, the ninny, the fool, natural and unartificial, struts abroad in his undesigned folly and simplicity more completely in the collections of Hierocles and Philagrius, than on any other ancient or modern platform. Mr. Ralston, indeed, gives us a glimpse or two of a kindred simpleton in the *durak* of his Russian Folk-Tales, but it does not appear from his account that this variety of the fool genus is always as "daft" as he would desire to be thought. And in his Zoological Mythology, Professor De Gubernatis discovers beneath the cloak of simplicity which enwraps the fool of Slavonic tradition, an embodiment of wit and cunning more akin to the clever fooling of a hero of early Roman History, "Brutus—*stulti sapiens imitator.*" In Russian, as in Scotch Folk-Tales, we come across parents who distress themselves prematurely as to the fate of unborn descendants; and old maids who melt into tears at the thought of what might have been had each of them married, and the offspring of a union of the son of one and a daughter of the other had the mischance to tumble out of windows. But for rich and rare development of downright inconsecutive unreasoning absurdity of folly, commend us to the Greek fool, whom beginners of Greek learn to welcome under the name of *Σχολαστικὸς*, and who deserves loving remembrance for having to many a youngster enlivened the dreary waste of the *Analecta Minora*. Who does not recall the "foolish fellow" wishing to swim, and what he resolved on a narrow escape from drowning; the ninny

who, proud of his achievements in house-building, carried a brick about as a sample; and the noodle, more bird-witted than the objects of his little game, who, when he saw a number of birds perched upon a tree, spread his cloak on the ground, and proceeded to shake it as if for fruit? But our friend *Σχολαστικὸς* soon came to an end, perchance because to the old race of pedagogues the mixture of pleasant and useful recommended by Horace seemed less wholesome for boys *in statu pupillari* than the thornier paths of didactic poetry and philosophic prose. Since then, however—indeed within the last five or six years—a German editor has been at pains to publish a scholarly and critical edition of the sayings and doings of the friend of our youth; and though his ideas of editorial duty certainly do not include the illustration of the Joe Millerisms which he has collected, by apposite and amusing parallels, nor, indeed, anything beyond a careful representation of the Greek text, with occasional notes and conjectures in cases of doubt and difficulty, he has abundantly demonstrated that it is by no means a true account of *Σχολαστικὸς*, to say that his *facetiae* are limited; nay, rather, that if we are content to group him with his Cumæan and Abderitan cousins, he will afford as ample a field of "jest-book" literature as any reader would be capable of traversing "while the fit was on." That such a fit was short-lived with the editor we have referred to—Alfred Eberhard of Berlin—we should infer from his admission that he desisted in the middle from the task of parallelism and illustration of Greek foolishness out of Latin, Italian, German, and French literatures, because he came to the conclusion that the labor of verifying his references and expanding his manuscript notes would tend to weariness rather than profit. But we are far from assenting to this conclusion, as a rule; although in this particular case there may have been an innate deficiency of humor in the editor, which made itself sufficiently felt to deter him from a task he would have accomplished only perfunctorily. That which

he has accomplished—after the matter-of-fact, business-like, unadorned manner of German editors—affords a tolerably huge bed of material to quarry, out of which those who choose may shape the stones to their particular fashion and purpose. We shall first give a brief and uncritical sketch of this material, as we find it, and as it is presented to us by Eberhard; and then proceed to introduce a Merry-Andrew, who, according to Porson, was the *fons et origo* of all the jokes usually fathered on Joe Miller.

The collective name of Eberhard's volume is 'Philogelos,' or, as we might name a like collection, 'The Complete Jester.' It consists ostensibly of the remains, in this kind of literature, of Hierocles—presumably a Neo-Platonist of Alexandria in the fifth century—and of Philager, or Philagrius, a Cilician rhetorician of about the same date of the Christian era. Little is known of either, except that their jocose remains were first put forth in collected form somewhere about the ninth or tenth century. One Marquardt Freher first published the *facetiae* of Hierocles in Europe about the beginning of the seventeenth century; and though editors at Cambridge, Leipsic, and Paris, in the next century, all availed themselves of his collection, they did nothing to improve or add to it, although by that time a large supplement of *facetiae* had been brought to light at Gröningen. Some of these were incorporated by Jacobs in his edition, the best known before that of Boissonade at Paris, which is the result of his calling into his counsels a certain Minoides Minas, a Greek well known to European libraries and museums as a manuscript hunter of somewhat unreliable habits and antecedents, and as one whom Eberhard does not scruple to designate "homo Græcus tot libris inventis, corruptis, ablatiis, subditis celeber." His connection with the Fables of Babrius, as they have been presented to modern scholars by the late Sir George Cornewall Lewis, and the doubtfulness of his representations to the British Museum, which purchased his MS. of the second part of those fables, are topics which recall to the learned a question yet unsolved. The result of his co-operation with Boissonade was, as might be expected, but a partial success. Late and unclassical Greek words constantly supply the *lacunæ* found by Minas in transcribing

the various MSS. which he copied; and something better and more trustworthy than the Parisian edition of 1848, which he inspired so dubiously, was yet to seek, when our present editor, occupied at Berlin with other literary researches, came upon valuable MSS. in the library of that city, by the aid and collation of which, and with the help, where serviceable, of Boissonade's notes, he was able to produce a far more complete edition of *Facetiæ*, under the comprehensive title of 'Philogelos,' than had yet seen the light. The date of this edition is 1869; and though even it bristles with queer and doubtful Greek, and, after exercising our ingenuity to the utmost, not unfrequently leaves us at sea as to the point of remarks or retorts which, had we but the key-word, would reward us with a hearty laugh at some new foolery, still it is a considerable gain on all editions that went before it, and may well serve the purposes of the curious reader until a more popular edition, with English notes and illustrations, shall have appeared. Out of what is intelligible in it we are not without a hope of being able to draw a sample of jokes, old and new, of a nature to move the risible organs of our readers, and to present to them a species of the "fool" genus with which the British reader is only half familiar. Rather more than one hundred jests are tacked to the name of "Scholasticus:" the rest are set down, in groups, to representative classes—misers, cowards, drunkards, woman-haters, and others who afford equally fair game—and to representative nationalities, such as the citizens of Cumæ, Sidon, and Abdera, the reputation of the last of which for especial dulness is as old as Martial or even Cicero.

Although it would be easy to adduce instances, in these collections, of the kind of jest which provokes the reflection that "it takes a wise man to make a fool," yet the greater number of *facetiae* recorded present rather unmistakable tokens of defective intellect, of incapacity for logical consecutiveness, and of an understanding weak enough to be the sport of every form of fallacy, and to justify the vulgar suspicion of a "tile off," or "an upper story short of its due furniture." The visitor of any large asylum will have been struck with the curious haziness as to *time* and *numbers* which characterises a large section of its unfortunate inmates; and this obfusca-

tion of the reasoning and reflecting faculty is very marked in the Greek simpleton. Sometimes it may be the only screw loose; and in the first instance we shall cite it may fairly have been so, or our fool could hardly have obtained his "diploma." "A man," we read, "accosted a foolish physician with a statement of his case: 'Doctor, when I wake up out of sleep, I'm half an hour in darkness before I recover my sight as I have it now.' 'Ay, indeed!' said the physician; 'then don't wake up till the half hour's over.'" The prescription in this case might have well proceeded from an unprofessional member of the same fraternity, who, "having a farm many miles off his dwelling-house, threw down *seven milestones* by way of abridging the distance;"* or from another of the same kidney, who, having heard from a friend that he had dined on a fine capon *killed a day before*, sent and bade the poulterer "*slay him a fowl killed the day before*." In some cases there is a leaven of obstinacy dominating the fool's folly; in others of conceit near of kin to it. The former is strong in the foolish hedge-school master, who on one occasion looked suddenly at a certain corner of his school and cried out, "Denis is behaving ill in the corner there." "He ain't come yet," interposed another pupil. "When he does come, then," retorted the self-justifying Scholasticus (Philogelos, No. 61). On some such fixed principle of self-respect the princess in 'Through the Looking-Glass' allows her maid bread and jam *every other day*; but it is always *yesterday or to-morrow*, and never *to-day*.

The above instances concern time; but not less erratic is the Greek fool's manner of dealing with numbers. A friend said to a fool who was going to travel, "I want you to buy me two slaves, each fifteen years old." Said the other, "Very good! and if I can't meet with a couple of such age, I'll buy you one of thirty years old." It was not quite the converse plan to which, according to Mark Lemon's 'Jest-Book,' the gentleman's servant resorted, who, when bidden by his master to secure him two inside places in the Glasgow mail—because he was too

huge for one—returned 'from the booking-office with the following report of his errand: "Please, sir, there were not two inside places to be had: so I've taken you one inside and one out." This peculiar confusion of mind as to number is of a kindred character to a particular sample of the mental weakness of Scholasticus—*i.e.*, when on being told that there were twenty steps up a certain ladder, he inquired "how many there were in going down it." On the other hand, it might be referable to the waggery of a half knave, half fool, such as the man in the Greek *facetiae*, who, having lent an ass which could not be returned to him, said, he did not mind taking a couple of mules as a set-off. But most probably the true explanation is to be found in an inability to take in more than one idea at a time, to distinguish singular and plural, and to comprehend collateral mention of space, time, and number. When a fool gets a fixed idea in his head, it seems to occupy it to the exclusion of other matters, and to lead him to ignore inconsistencies of conduct, however incompatible with such an idea. Thus we read that "an Abderite wanted to hang himself. The rope broke, and he bruised his head. Without delay he ran into the apothecary's for a plaster, applied it carefully to the bruised place, and then proceeded to carry out his suicidal project" (Philogelos, No. 112). The joke reminds us of one of the anecdotes told in the pleasant 'Memorial of Archibald Constable,' by his son, recently published. An old deaf aunt of the publisher was on her deathbed, and her mind, always eccentric, had begun to waver and fail. "Ann," she said to her attendant, "if I should be spared to be taken away, I hope my nephew will get the doctor to open my head, and see whether anything can be done for my hearing."

Not a few of the absurdities of which the Greek simpleton is guilty will be found to arise from imperfect definition of terms. Ambiguity is induced by his taking in one sense what was said in another, or by his refusal to accept a plain statement, under the tempting encouragement of a verbal fallacy which occurs to him. An example of the former is to be found in the capital story about a waterproof cape, which the Greeks called "*birrus*." "A man said to a fool, 'Lend me a cape just a field's length.' 'I can lend you

* Possibly it may have occurred to the Greek fool that the roadmaker might, like the Irishman, plead the number of milestones in excuse of the badness of the roads. "If the quality be rather inferior, we give good measure of it anyhow."—Jest-Book, p. 152.

one,' he replied, 'reaching as far as the ankle; but I haven't one a field's length.'" It is obvious that the one understood the word "length" as relating to feet and inches, the other as having reference to time measurement. The other case may be illustrated by a story of a foolish traveller given by Hierocles, whose equipage came to a standstill because the mules were too tired to go further. Upon the driver's unloosing them for a little rest, on finding themselves freed from the yoke they took to running away. "Knave," said Scholasticus to the driver, "don't you see that the mules are running? It's the vehicle which is in fault, and too tired to run" (Philog., Nos. 99, 100). Not very unlike this story, in the ambiguity arising from two aspects of the same object being contemplated by the interlocutors, is that of the Abderite who was going to sell a pitcher that was bereft of its ears. When asked why he had removed these, he replied, "in order that the pitcher may not run away when it hears that it has been sold."

It would seem from the annals of Scholasticus that the contemplation of twins was a very frequent trap to catch and bewray fools. On one occasion, happening to be in company with persons who were remarking the wonderful likeness between two twin brothers, the worthy whose remarks we are chronicling delivered himself of the observation: "This one's not so exactly like that as that one's like this." But such profundity and show of subtlety does not seem to have characterised our friend in his actual intercourse with twins, for we read in Hierocles a joke about him which repeats itself in many languages: "One of twin brothers died; a fool, meeting the survivor, accosted him thus: 'Was it you that died, or your brother?'" The question recalls at once a similar one addressed, says gossip, by a certain Lord Mayor of blundering notoriety, to a gentleman who had had the small-pox twice: "Did it prove fatal," he inquired, "the first time or the second?" As to twins, a little ambiguity of speech is not necessarily proof positive of folly. Not very long since we read in a letter of some twins, who, when they were babies, were always getting mixed, but one of them was drowned early in life, and the survivor used to say, "no-body could ever tell whether it was me or

my brother." "I always knew," was the naïve conclusion of the account given by one of those interesting individuals, "what a source of constant confusion he and his twin brother were to the nurses, housemaids, and schoolmasters."

Another and wider field, as might be reasonably expected, for the display of our hero's talent, or want of it, may be designated that of *malapropos*. In perfect good faith and honest gravity the simpleton utters sentences meant for compliments, though if taken in their natural interpretation they might convey an ill wish or a direct affront. Some of these speeches have their modern counterpart, and are not confined to the annals of the Greek Tomfool. The Duchess, for example, who in the innocence of her heart told George II, "how much she should like to see a coronation," may not have passed in her day for an absolute simpleton, especially if she was pretty; and yet there was little to choose between her wisdom and that of Scholasticus, who, when his father-in-law, meeting him on his return from foreign travel, inquired after his fellow-traveller, replied, "Thank you, he's very well, and in capital spirits, for he's buried his wife's father." There is no reason to doubt that such an answer may have been made; for we are cognisant of a well-attested incident of a call upon newly wedded folks, in the course of which one of the visitors, going through the compliments and formalities of the customary cake and wine, lifted his glass towards the bridegroom and said that he hoped he should often have to wish him health and happiness on a similar occasion. This very reply, in truth, is the substance of the 72d of the *Facetiæ* of Hierocles in Eberhard's collection, where the unconscious joker "hopes often to celebrate the same feast, and always as prosperously." In some examples of this kind of silly speech the *malapropos* is broadened into an unintentional disregard of filial piety—as, for instance, when our fool, when his aged father was in *extremis*, invited his friends to attend on the morrow with garlands, as for his funeral. On the morrow the friends arrived, and finding the old man not dead, but somewhat better, were naturally vexed at having come on a fool's errand. But their bidder's politeness—the offspring of conceit and foolishness—was equal to the occasion.

"I, too," he said, "am ashamed at your waste of time, and love's labor lost; but bring the garlands to-morrow, and we'll bury him, be he how he may."

It was a parity of reasoning, or of unreason, which was manifested by the Abderite's son in the same collection (No. 123), who, having burned his deceased father, as the law directed, ran into the house, where his mother lay sick, and said to her, "There's still a little wood over; if you're agreeable, and it's feasible, come and be burnt with the same fuel." He lost sight of his filial piety in a one-sided grasp of the idea of "making one job of it." So, indeed, it is in many of these exhibitions; the dominant idea crushes every other out of the narrow upper story of the numskull. Scholasticus, we are told elsewhere, was writing to his father from Athens, and pluming himself on his progress in rhetoric and elocution, to acquire which he had been sent thither. He added this paragraph—"And I pray, sir, that on returning home I may find you a defendant on a capital charge, that I may air my oratory in your defence." This is worthy of the Irish horse-stealer, who, when O'Connell had obtained his acquittal, exclaimed, in the exuberance of his gratitude, "Och, counsellor! I've no way *here* to thank your honor; but I wish't I saw you *knocked down in my own parish*—wouldn't I bring a faction to the rescue?" It ought to be known, however, that on occasions the Greek fool was the father, and not the son, and that his *malapropos* was as unparental as the other's was unfilial. A fool's son, on being sent to the wars, bragged that he would come back with the head of one of the enemy. "Good!" said the old simpleton; "but even if I see you come home *without a head*, I shall be thankful and delighted." But to judge from these *facetie*, a twist or a narrowness in the brain is apt to provoke the oddest *contretemps* and recriminations betwixt son and sire. In one case, a grown-up son, being twitted by his father with having a child to maintain, and advised to kill it, because the expense fell practically on the old *paterfamilias*, afforded a fine illustration of the "tit-for-tat" in a fool's mouth, when he retorted, "Just you kill your own children, and then advise me to destroy my little one!" Another, having an altercation with his father, said to him, to crown all, "Base varlet! don't you see how you

have wronged me?—for if you hadn't been born, and stood in the way, I should have come into my grandfather's money." We are reminded of the Irish clergyman, who, noticing among the portraits of the Scottish kings in Holyrood Palace one of youthful appearance, while his son was depicted as old, and as having a venerable beard, exclaimed, in wonderment, "*Sancta Maria!* is it possible that this gentleman was an *old man* when his father was born?"

In the sayings and doings of some of Hierocles's clients, it comes out that father and son are equally qualified for a degree in daftness. Witness the following instance: "A fool's son was playing at ball. The ball fell into a well. Young Hopeful bent over it, saw his own shadow, and demanded the ball of it. When no answer was made, he complained to his father that the ball was not given back. Thereupon the father stooped down, and, addressing his shadow, expostulated: "Come, master, you give my son his ball back" (No. 33). We have no index, however, of the state of the Cumæan father's intellect, whose daft son, being condemned to death in his father's absence, besought all the lookers-on, on the way to execution, not to tell his father, for he would certainly beat him to death if he heard of it. "Teach him to know better next time, sir; teach him to know better next time," was the moral reflection, in our hearing, of a half-witted old man, when told of the hanging of a certain murderer. In none of the Greek *facetie* that we have met, do we find any case of fraternal affection so puzzle-headed as that developed by the Irishman who enlisted in the 75th Regiment, in order to be near his brother in the 76th.

A grand commonplace of the fool in his folly is the category of "sleep and dreams." The head that can barely carry one idea at a time is incapable of distinguishing waking sights and thoughts from those of sleep. Thus a man met a fool, as we read in Hierocles, and said to him, "Sir blockhead, I saw and spoke to you in my sleep!" "A thousand pardons," was his reply; "I was so busy I didn't hear you." In like manner, some one said to another simpleton, "Demeas, I saw you here, three days back, in my dreams." "You lie!" he replied; "I was in the country." His brain seems to ignore the distinctions

of waking and sleeping, whether it be to gainsay and confute another, or to make the best of a bad bargain, as in the following instance of an Abderite. This worthy dreamed he was selling a sucking-pig, for which he asked a hundred pence. Some one bid him fifty; he stoutly refused, and in his energy woke up. As pig and money were alike denied to his waking sight, he speedily closed his eyes again, and, extending his palm, said to the dreamland bidder, "Well, well, let's have the fifty!" A very odd story is told in the 56th joke of the collections before us, of greater length than these jests commonly are, and looking more like a cutting from fable-lore, such as M. Minas might have introduced into them by mistake. We cite it in this place because sleep has its part in it, and the fool's confusion and blundering are connected with it, though not so directly as in the above instances. "Scholasticus, a bald-pate, and a barber, were travelling together. Halting in a desert, they agreed each to keep awake for four hours, and to watch the baggage in turn. It fell to the barber's lot to watch first, and he being a wag, played the foolish fellow the trick of shaving his head before waking him at the end of his watch. Aroused from his snooze, the fool began to rub his head, and finding that it was bald, said to himself, 'This barber's a poor good-for-nought, for by mistake he has awakened the bald-pate instead of me.'" He was, it seems, reduced to the same doubt of his identity, as the venerable egg-seller of our nursery rhymes, who, having had her petticoats cut short by a pedlar named Stout, was driven to the test of her little dog's recognition for the assurance of her being her very self.

Returning to genuine cases of jest arising out of confusion between sleeping and waking, we may cite that of the two fools, one of whom dreamed that he had trodden on a nail, and straightway (on waking) bandaged his foot. His comrade having asked and learned the reason, delivered himself of the sage observation: "Rightly are we called foolish; for why ever do you go to rest without your shoes on?" A meet pendant to this class of jests is the story of the silly fellow who, wishing to ascertain whether sleeping became him, shut his eyes, and then placed himself before a mirror. It may, perhaps, be capped by the modern jest

of the new maid-servant, whose mistress, having heard strange sounds at night, cross-examined her as to whether she was given to snoring. "I really don't know, marm," replied Becky, innocently; "I never lay awake long enough to discover."*

From the "sleep" category of jest-lore, we may pass to the *ana*, so to speak, of fools under medical treatment, in connection with which it will be fair to chronicle a few silly speeches attributed to professors of the healing art. When Tomfool falls sick, his folly is apt to read the doctor's prescription too literally, and in his anxiety to act upon it to frustrate his own over-caution. Such was the case of one who, having had his uvula operated upon, was bidden not to talk. Accordingly, he desired his slave to return for him the salutations of those who bade him good-morrow; but, when this was done, kept saying to each in the fulness of his courtesy: "Don't take it as an affront if my slave salutes you in my stead; my medical man has bidden me not to talk." "Another fool" (we still quote our Greek oracles), "being sick, agreed with the doctor that he would pay him a fee if cured. So when his wife blamed him for drinking wine when he was in a high state of fever, he retorted, "What! do you want me to get well, then, and to have to pay the doctor his fee?" Such, we suppose, was the resource which presented itself to the simpleton for endeavoring to be even with his medical adviser's demands, an instance of the sharpness of which is given under the head of Cumæan Facetiae (p. 175), where a doctor having brought a patient sick of a tertian fever to a semi-tertian, demanded of him half his fee. It was not always, however, that his patients were ill-matched with him. One such, who deserves his classification with the witty fellows rather than the foolish, being treated for ophthalmia by a thievish doctor, had his lamp stolen by him, and lent out on usury. One day the medico asked his patient, "How are your eyes?" "Why, bad enough," said the witty fellow off-hand. "Since you lent my lamp, I can't see it." Two variations of one and the same story anent the over-conscientiousness of convalescent fools must not go

* Mark Lemon's Jest-Book, p. 276.

unchronicled. One of the class, seeing a physician coming as was his wont, slipped out of sight. A friend, observing this, asked the reason. "Well," said the other, "'tis some time since I have been sick, and really I'm ashamed to be seen by him." The other is a still finer illustration of true *mauvaise honte*. A doctor gave up a Cumæan patient. The patient recovered, and shirked the doctor. On the latter inquiring the reason, the explanation was as follows: "Why, you said I was dying, and so I'm ashamed to be alive and well." Both these patients exhibit such tenderness for their medical man's veracity, as to merit the approval with which a modern leech is said to have commended a punctual swallower of his medicines: "Ah, my dear sir, you *deserve* to be ill!"

Perhaps, however, under the surface, these simpletons may have had a better reason for shirking the doctor, if, as some of these anecdotes go to prove, he was not only bungling, but fond of tentative experiments. We read of a Cumæan doctor, who, whilst performing a surgical operation upon a person crying out in severe pain, changed his knife for a blunter one. Such misplaced pity reminds us of the dentist who stops in the midst of extracting a tooth to express to his patient the fear that he is hurting him. Of another Cumæan operator, we learn that, after dressing a wounded head, he laid the patient on his back, and poured water into his mouth, to ascertain whether his plastering was water-tight. Some of these gentry would seem to have been churls withal, and this without the signal gifts of healing which excused the brusqueness of an Abernethy or a Jephson. Said a poor patient to one of these, "I can't lie down, stand, nor sit, without pain." "There's nothing left for you then," said the M.D., "but to—be hanged." Another doctor, of the same temper, and withal bereft of one eye, asked a sick man, "How do you find yourself?" "As you see," was the reply. "If," rejoined the doctor, "you find yourself *as I see*, one-half of you is dead." We fear, too, that, in the judgment of the compiler of these anecdotes, the professors of the healing art were more sordid than their modern representatives, besides being more unskilful, and less judicious in their remarks. *Ecce signum!* "A Sidonian

physician having received a thousand drachmæ as a legacy from a patient at his decease, complained to the next of kin, at the funeral, of the legacy being so shabby. In course of time the heir fell ill, and on sending for the same physician to deal with his disorder, was met with the rejoinder, If you'll leave me five thousand drachmæ, then I don't mind *doing for you as I did for your father*" (§ 139). Here we have an undesigned truth; in the other cases rudeness and bitter irony. That a witty saying may be fired off by a medical practitioner with no impeachment of his courtesy or politeness, is seen in the case of a doctor's reply to a lady who complained to him that "alas, she was near thirty!" "Do not fret at it, madam," he said, with admirable irony; "you will get farther from that frightful epoch every day."

Though we are not aware of instances of it in these Greek *facete* and chronicles of foolish speech, it is by no means improbable that the medical authorities impeached in some of them would have justified themselves, like other empirics, with an "if," and established themselves in the right, in all cases. That this was the way with the astrologers, who were called in of old as regularly as the doctors, two anecdotes will suffice to show. "A senseless astrologer telling a child's horoscope said, 'This child will grow up to be a rhetorician, a vice-governor, and a governor.' The child died. Its mother applied for repayment of the fee, on the plea that the orator and statesman in embryo had died in childhood. 'Nay!' said the astrologer; 'and so he would have been all this, if he had but lived.' Another charlatan of the same sort said to one who consulted him in a lengthy speech, 'It is not in your horoscope that you should have children.' 'But I have seven,' said the other. 'Take care of them, then,' returned the unabashed astrologer.

Beside the various oracular responses of embodied simplicity which we have endeavored to classify, there are extant many others of a more isolated character which bespeak either unmixed foolhood, or a mixture of wit and folly. There can be little doubt that the order to stuff a pitcher, that had served for a bolster, with feathers by way of making it softer, if ever it was given save in story-land, proceeded

from an unrelieved idiot. But, like the tale of the simpleton who, wanting to cross the river in a hurry, preferred to ride into the ferry-boat and not alight, it is only a good story. Absence of mind and maladroitness might explain the story of the man who, going to inquire for a sick friend, was told by his widow, "Alas, he's gone!" and simply replied, "If he return, will you say I called?" but there was method in the madness of him who, when called to task for usurping his hall-porter's function, and saying "not at home" with his own lips, proceeded to pick a quarrel with the visitor because he doubted *his* word, though he would have believed his slave's. The first part of the story is tacked to a British satirist, who may have got it from this source, and it is also known to Cicero. There could be no mistake as to the mental calibre of the pedestrian who was surprised at finding a piece of road which was a declivity as he went, present itself as a stiff ascent to his returning steps; but the jest of the host whose guests enjoyed a collared head so much that they vowed they would dine with him next day, upon which he went to his butcher and ordered *another head off the same pig*, is an anticipation of the Irish bull, and worthy to figure side by side with the Irish spirit-merchant's advertisement, that he has still on sale a small quantity of the whisky *which was drunk by his late Majesty while in Dublin*. On the whole, however, though the entire collection goes to furnish a complete treasury of ancient Joe Millerisms, we should maintain, as we started by averring, that to meet a fool in his folly, a born fool judged out of his own mouth, the finest opportunity is in Hierocles and his fellows and imitators. The royal jesters of our own courts, in past ages, and the so-called dafties of our jest-books, constantly turn the tables on their interrogators—as in the case of the miller who followed up a wise fool's admission, that "some things he kened and some he didna ken," by an attempt at definition and system. On being asked what he knew, he said, "I ken a miller has aye a gey fat sou." "And what d'ye no ken?" said the miller. "Ou," he returned, "I dinna ken at wha's expense she's fed." There are very few such instances of full change given in the literature of Scholasticus, though we are inclined to rank among the nearest approaches to it the daft son's

answer to his braggart father's question, when he met him in the market, fresh from the country. "Well, boy, and what are the sheep doing?" "Why, father, the one's lying down, the other's on his legs" (No. 108)—an exhaustive account of his father's flock, which did not exceed the dual number. Some of our best English jests savor very strongly, however, of a Greek original. We look in vain in the collections which are to our hand, for the source of one which is given by Mark Lemon (p. 147), and of which the fun arises out of the achievements of one sense being adduced to outvie those of another. "A man was boasting of strong sight, and said—'I can distinguish a mouse on the top of yon high tower.' 'I don't see it,' said the other; 'but I can hear it running.'" But others are not so far to seek. Here, for instance, is a well-dressed and cleverly modernised version of an old friend. "A well-known borrower stopped a gentleman whom he did not know, and requested the loan of a sovereign. 'Sir,' said the gentleman, 'I am surprised you should ask me such a favor, who don't know you.' 'That,' replied the borrower, 'is the very reason I do so; for those who do know me won't lend me a farthing.'"^{*} A sort of appendix to the *facetia* of Scholasticus—some fifteen sayings, not of the wittles, but the witty (or *εὐτράπελοι*—contains one repartee which may well have been the foundation or fountain-head from which the borrower got his idea. "A witty fellow," it runs, "when asked to lend a couple of flesh-scrappers after a bath—one to a stranger, the other to a man whom he knew, but knew to be a thief—gave answer thus: 'I know you, and I won't lend; and I won't lend to you, because I don't know you'" (§ 150). Another of these so-called witticisms is an old and dry joke saddled on many, though here it is referred to the typical *εὐτράπελος*. "A witty joker, when a silly barber inquired 'how he should shave him,' replied, 'Silently.'" In his essay on Garrulity, Plutarch tacks this anecdote to the name of Archelaus. "Barbers," moralises Plutarch, "be constantly busy fellows with their tongues—and no marvel; for lightly the greatest praters and idlest persons in a country frequent the barber's shop, and sit in his chair, where they keep such chat that it

^{*} Jest-Book, p. 178.

cannot be but by hearing them prate so continually, his tongue also must walk with them; and therefore Archelaus answered very pleasantly unto a barber of his that was a man of no few words, who, when he had cast his linen cloth about his shoulders, said unto him, 'Sir, may it please your Highness to tell me how I shall cut or shave you?' 'Marry,' quoth he, 'holding thy tongue, and saying not a word.'* Almost as sound and pertinent as these answers, though the one is incommunicative and the other guarded, are two which, in the Greek collections, are attributed to fools of one nation or another. The first was to a bystander who inquired, as a stately funeral passed along the street, who was dead. The mourner interrogated said, with an indication of the finger, "The person who lies on the bier." The second records the oracle of a foolish soothsayer (?) who, when taken prisoner and bidden by the foe to prophesy the issue of an impending battle, said with much gravity, "You will win the day if the enemy don't steal your back hair"—i.e., if you don't turn your backs to them. Perhaps this last is but a sample of the wisdom of a good many ancient oracles; but it would be a bold thing to say that the utterer of it, ancient or modern, was necessarily demented.

Not to weary the reader with a plethora of pleasantries drawn from the collections of Hierocles and Philagrius, it may be affirmed, without fear of controversy, that there are many stories in the amusing 'Essay on Irish Bulls' which might be traced up to a Greek origin; many more in that storehouse, and others of the same kind, which, if not paralleled, may be matched by blunders of Greek coinage. The jest-books tell of a templar who left a note in the key-hole, and in it directed the finder, if he could not read, to carry it to the stationer at the gate, who would read it for him. Such misdirected forethought, however, is nothing in comparison of the story of the foolish Greek pedestrians, one of whom having lagged behind and lost sight of his fellow, on reaching a milestone found that he had written upon it "Come on and catch me up." "Not so," wrote the simple slow-goer in answer, on the same medium of communication; "you wait for me."

Without attempting to illustrate our statement by any array of examples, we may remark, in conclusion, that the hoard of *facetiae* and fooleries which we have been laying under contribution is rendered slightly unmanageable by the occurrence of a great many Latin words in Greek characters, as well as of late phraseology, especially in the matter of oaths and asseverations, which betoken a Christian rather than a classical date as that of their composition. It must be added that, owing to the fault of transcribers, at one time or another, the text is in some places not merely ambiguous but hopeless. We have not had access to Boissonade's edition, but Eberhard is careful to cite it in explanation of cases of difficulty; and our impression is, that after both have been called in, a great many passages need an abler and surer healing touch. But, nevertheless, there is a liberal residue—when we have consigned two or three dozen *facetiae* to the hospital—of good sound samples to provoke laughter, to spice conversation (sparingly, like a good artist), and to vindicate the antiquity of foolish fellows and simpletons. Enough, perhaps, to furnish Charles Lamb with an answer, "historical and authentical," albeit collective and not individual, to his query in *Elia*,* "Who was the greatest fool that ever lived?" Certes! those of Hierocles are greater, more natural, more lovable, from Lamb's point of view—i.e., veneration for an honest obliquity of understanding—than any whom he trots out in his "Essay on All Fool's Day." Amongst them, up and down the ranks of a company,—which it would be well if some English translator or remodeller would present to his modern public in suitable attire—might be found the "fool of nature," "the self-sufficient, positive fool;" the mixed character "whose every inch that is not fool is rogue;" the fool "that now and then is right by chance;" and the wise man who makes a great show of his little foolery. Whoso undertakes to marshal the Greek fools for review before English readers may fairly say, with Louis XIV. to the Venetian ambassadors, "J'opposerai un si grand nombre de fous à vos sages, que toute leur sagesse sera incapable de leur resister."—*Blackwood's Magazine*.

* Plutarch, De Garrulitate, §. 13—Philemon, Holland's Translation.

* *Elia*, 1st Series, p. 96-100.

M. GUIZOT.

HAD M. Guizot died in 1847, after he had brought about the Spanish Marriages, or in 1848, after he had pulled down the monarchy of Louis Philippe, the general judgment of his character would have been very different from what it is to-day. Men of the world, as well as stern moralists, would have said that he had heartlessly bound a young Queen to a man whom she did not love, whom she could not love, and who was to be her husband only in name. They would have said that the austere professor of a Puritanic creed and the pattern of domestic virtues had been guilty of a crime which even the cynicism of the world itself does not condone. They would have said that so base an intrigue could not serve France in the long-run, and that events would yet prove Guizot to have been as short-sighted as he had been unscrupulous. A different class of censors would have uttered an equally emphatic condemnation after the Revolution of 1848. How, they would have asked, could Guizot have believed that a Constitutional Monarchy, the most delicate of all political machines, could be supported in France, the most volcanic of all countries, on so limited a suffrage as of constitute the bourgeoisie a new aristocracy, and by the aid of what was substantially a vast system of bribes? How could so able a man have persuaded himself that he could resist the demand for an extension of the suffrage? How could so profound a student of the British Constitution and of English history have taught himself that a King whose title came from an Act of Parliament could rely on a mingled system of corruption and main force? Louis Philippe, it would have been said, might have died on the throne but for the infatuation of his Minister, and Guizot might have placed the Monarchy beyond the dread of Revolution if his great intellect had not been blinded by his ungovernable pride.

In the main, we think, these denunciations would have been just; but they would have left out of sight a large part of Guizot's life, and the best part of his character. Happily the Revolution of 1848 banished him for ever from office, and forced him to live in the solitude of Val Richer for a quarter of a century.

Few men have been better fitted by nature and by training to enjoy a country life, and the solitude of his Normandy home not only brought out all that was best in Guizot's character, but softened the memory of his political errors. It enabled his enemies to see how great a man he remained even after justice has assailed him with a stern indictment. English people, in particular, soon forgot the questionable part of his career. They had always found good reason to like him. He had studied our history as deeply and as reverentially as if he had been an Englishman, and he had written books of permanent value on the men of our greatest Revolution. Our form of Government, and the temper in which we usually conduct political disputes, had been the subject of his admiration. He was never tired of telling his own countrymen that they must strive to acquire the political fairness of the English. Such admiration, coming from such a man, was the most powerful of all flattery, and it is no wonder, then, that the English public admired M. Guizot in turn. He had, also, other attractions of almost equally great force. He was a Protestant, and he was proud of his creed. Calumny had never dared to whisper a syllable against his private life, and all knew it to be stainless. M. Guizot had displayed all these good qualities when he had lived in London as the Ambassador of Louis Philippe, and they could not be forgotten when he lived as an exile in Brompton. He was likewise fond of English ways, the English language, and English people. He himself was a master of our tongue, although he never lost the French accent, and his family spoke English as well as if they had been natives of these islands. During his later years the old statesman drew many English visitors to Val Richer, and they were charmed by the simplicity and the beauty of his life. His studious habits, his walks with his grandchildren, his cheerfulness, the affection and respect which he inspired, the daily reading of the Bible in the midst of his family, the worship in which he took part with patriarchal fervor, and the freshness of the interest with which he studied and discussed the daily events of his own afflicted country, all made up a

beautiful picture of a green and great old age. During his visits to Paris he showed more of his old restless self. The drawing-room of his daughter, Madame de Witt, in which he received his friends, was the scene, if not of intrigue, at least of political talk at once animated and fervidly Royal; and at the age of eighty-four, or even of eighty-six, Guizot flung himself into the conversation as eagerly as the youngest of the throng. Little more than two years ago, on one of these occasions, the present writer found the old philosopher as erect, as lively, and seemingly as vigorous as men of half his age. The grasp of his hand had almost the strength and the firmness of youth, and his voice had a ring and a steady power which suggested that he might still have won honors in the tribune. His immense fund of energy found vent in the deliberations of the French Academy, to which he went oftener than many of the younger members. He was ever ready to take part in discussions on philology or style, and M. Cuvillier-Fleury tells us that only a few weeks ago the wonderful old man vigorously debated literary and grammatical questions. And he domineered in the Academy as much as he had once domineered in the Senate. He ruled that body with a rod of iron. His word could exclude a candidate or make a prayer for admission certain to succeed. It was he who a few months ago raised the tempest respecting the reception of M. Emile Ollivier. He would not permit the political trifle who had made war against Germany with a "light heart" to praise the man of Sedan in the theatre of the Palais Mazarin, and he stigmatised M. Ollivier to his face, with some of the angry contempt which had once flung forth the famous retort, "Montez, messieurs, montez ! vous n'arriverez jamais à la hauteur de mon dédain." His capacity for discharging the bitterest and most Olympian scorn could be easily credited by any person who had even once seen his intense and eager expression, his finely-chiselled features, his high but retreating brow, his pale and emaciated face, and those lines of the lips which seemed to imply everlasting determination. No one could wonder that such a man could debate a point of philology as fiercely as he could argue a question of state. And the Protestant Consistory felt his power as much as the French Academy. He was not

only a Protestant, but a Protestant of the oldest and most biblical orthodoxy. He was, perhaps, the only man of our time whose intellect was first-rate, whose philosophical perceptions were of European extent, and yet whose theological creed was that of the sixteenth century. He seems to have absolutely hated the Latitudinarian party. Hence all the attempts of M. Coquerel *fiis* and the other representatives of French Latitudinarianism to expand the compass of the old Huguenot belief, and to soften the austerity of its dogmatic deliverances, found in Guizot the most implacable of foes. He seems to have regarded these Unitarians as almost wicked, and he was the leader of the party who, during a memorable debate in the Consistory two years ago, defeated the attempt to include the Unitarians within the legal bounds of Protestant belief. His enemies styled him "Pope Guizot," and he merited the title. A more Hildebrandine personality has not been cast into the strifes of this century.

Guizot lived so long, and did European work so early, that it is not difficult to guess the place which he will hold in the estimation of posterity. As a statesman, he cannot be accounted great, if the proof of greatness be success. His political career was a splendid disaster, and it was such because he knew books better than men. He boasted that he was a *doctrinaire*, but he meant that he was a philosophic statesman. In reality he had so begirt himself with the armor of pedantry, that he could not move freely among the shifting throng of the world. He fancied that he could import the British Constitution, and what he did import was a constitutional rock on which the Monarchical ship went to pieces. Had he been less of a professor, had he been more teachable, or had he not regarded his fellow-beings with infinite disdain, France might still have been a Monarchy, with Louis Philippe II. as her king. Guizot was mainly responsible for the ruin of his own party. But it would be a mistake to deny the claim of greatness to all statesmen who have missed the main object of their life; and it is difficult to withhold such a title from Guizot, when we look more closely at his career. In his youth, before he entered the Chamber of Deputies, he was for years the mainspring of the Ministry of the Interior. As Minister

of Public Instruction, he effected a greater change in the educational system of his country than any of his successors. For eight years he was in fact, if not in name, Prime Minister of France, and during all that time he was, on the whole, the first of European statesmen. His immense knowledge of political facts, his faculty for work, his vigorous pen, his splendid powers of debate, his iron will, and the strength of his personality, enabled him to crush a host of foes, and to hold the chief place in a country which is more difficult to rule than any other. Nor did he hold his place by playing upon the affections or the vanity of the men whom he managed. He never condescended to flatter or troubled himself to please. He lectured King Louis Philippe, the vainest of men, and therefore the most impatient of dictation. He lectured the Chamber of Deputies, the most turbulent body in Europe. He lectured his subordinates. We suspect that he tried to lecture Lord Palmerston, and he certainly attempted to browbeat Lord Aberdeen. The habitual attitude was that of a lecturer to the whole human race, and hence he stirred up a host of enemies. Yet he held the front place in France, in spite of M. Thiers, in spite of the satirists, in spite of his Protestantism, and in spite of the fact that he was feared rather than loved even by his followers. Such a man was surely great in force of character.

His literary work can be spoken of with more comfort. Guizot was not a great writer in the same sense as our own Carlyle, for neither his thought nor his style was so distinctive or so moving as to constitute a landmark in literary effort. His reflections tended to become thin, and his rhetoric lacked the incomparable simplicity, brevity, and easy flow of the best French prose. He has written no book that has made a marked change in the current of opinion, nor has he left a single page of classic style. If we look at the quality of his writing, we should call him eminent rather than great. And yet it is, again, difficult to deny the title of "great" to a man who in his youth wrote the works on the Civilisation of Europe and of France, and who in later years so powerfully told the story of our own Puritan Revolution. His philosophical writing stands, at all events, on a high plane. It is free from the slightest tinge of provincialism, and is, indeed, address-

ed to the whole of educated Europe. He would have left a high name in literature, even if he had written nothing more than his books on the philosophy of Civilisation. There is one damning blot on his character, and that is the share which he took in the negotiation of the Spanish Marriages. It was he who must be held responsible for that foul transaction. In vain do his friends plead that the selfish ambition of Louis Philippe was the cause of the intrigue; for Guizot could have left office rather than have lent his genius to the perpetration of such an infamy, and the truth is that he flung himself into the grimy business with amazing zeal. Equally in vain is it to say that the rival diplomatists were not a whit more high-minded. That is not true of Lord Aberdeen, and if it is true of the others, it furnishes no excuse to the Puritanic Guizot. He ought to have risen above so base a thing. It would seem that essentially theological natures, when they plunge into intrigue, are peculiarly apt to blur the plain lines of morality by the subtlety of their manipulation. No nest of secular intrigue is so gross as an ecclesiastical synod, and Guizot seems to have carried a dangerous habit of casuistry into the Council-chamber and the Senate. He was one of those high-minded men whose subtlety often leads them to do acts which shock even the rough moral sense of the crowd. Nor, when laboriously telling the miserable story in his own memoirs, does he betray any perception of the fact that he had been sinning against an elementary law of human nature. He forgets every other consideration in the desire to show that he had pre-eminently served his master and France. But in reality he had injured both, while he had brought woe to Spain. Let it be added, however, that the negotiation of the Spanish Marriages is the one sinister record of his career, and that the purity of his private life was as marked as the fatal flaw in his public. On the whole, he was a great if erring man; great in the intensity of his ambition, and the force of his will, and the domineering strength of his character; great in his freedom from the frailties of our nature; great in the place which he has carved for himself in European history; and his greatness was softened into something like beauty by the serene evening of his long and illustrious life.—*The Spectator*.

THE SPECTRE OF THE ROSE.

FROM THE FRENCH OF THÉOPHILE GAUTIER.

The original begins:

"Souleve ta paupière close,
Qu'effleure un songe virginal!"

I.

THOSE slumbering lids unclose,
Where pure dreams hover so light!
A spectre am I—the Rose
That you wore at the ball last night.
You took me, watered so late
My leaves yet glistened with dew;
And amid the starry fête
You bore me the evening through.

II.

O lady, for whom I died,
You cannot drive me away!
My spectre at your bed-side
Shall dance till the dawning of day.
Yet fear not, nor make lament,
Nor breathe sad psalms for my rest!
For my soul is this tender scent,
And I come from the bowers of the Blest.]

III.

How many for deaths so divine |
Would have given their lives away!
Was never such fate as mine—
For in death on your neck I lay!
To my alabaster bier
A poet came with a kiss:
And he wrote, "A rose lies here,
But kings might envy its bliss."

—*Macmillan's Magazine.*

STAR-GAUGING: SIR W. HERSCHEL'S TWO METHODS.

BY RICHARD A. PROCTOR, B.A., F.R.S.

PART II.

A NEW interest is given to Sir W. Herschel's researches when his earlier papers are correctly interpreted. We see him preparing in 1785 to deal with the most stupendous of all the problems of astronomy. A noble theory of the universe had presented itself to his mind, and

already he had carried out a series of observations tending to indicate the proportions of the sidereal system if that theory were true. But now he was preparing for labors of a more arduous kind, the thorough examination, in fact, of the stellar heavens so far as they were visible

from his northern point of view. No celestial objects, except the members of our solar system, and the mysterious comets, were to be regarded as unimportant in this inquiry. The stars by their distribution in greater or less profusion, the nebulae and clusters within our system as representing various stages of stellar aggregation, those external to it as indicating its more striking characteristics, and other orders of objects (not suspected when he began his labors), as affording new evidence respecting its structure,—all might throw light on the theory he had advanced, or might, when carefully studied, afford reason for abandoning or modifying that theory.

I apprehend, then, that had the notice of astronomers been attracted, at this early stage, to the work on which Herschel was entering, they could not but have awaited with extreme interest the result of his labors. It does not appear that this was actually the case. It may be that the difficulty and complexity of the problem he had taken in hand, or perchance the quiet and unobtrusive manner in which he presented it as it then appeared to him, or some other cause may have been in operation, but certain it is that very little notice was taken of Herschel's special work then, or during the remainder of his life. None helped him, though his researches were manifestly far beyond the strength of any single worker. No comments on his stellar observations, so far as they related to the great problem he was attacking, were made by contemporary astronomers.* It was alone, but confidently, that he advanced into the mysterious depths surrounding our solar system, seeking, by the dim light which made the darkness visible, to determine, if it might be, the forms dimly discernible within those gloomy wildernesses of space.

Many years passed before he again addressed the scientific world on the great subject which he had taken as the "ultimate object of his observations."

* To the general public Herschel was known as the discoverer of the Georgium Sidus, the observer of supposed volcanic eruptions on the moon, and for a variety of other such discoveries as are easily understood—or misunderstood (which comes to the same thing so far as general fame is concerned).

Eleven years* after the enunciation of the theory described in the former part of this essay, we find him pointing out, as the result of his researches during that long period, that the hypothesis of a general uniformity of structure in the galaxy "is too far removed from the truth to be depended upon." And although this does not imply a definite withdrawal from the theory of 1785, yet the stress now laid by Herschel on probable varieties of structure is a novel feature in his theoretical treatment of the subject.

But it was in 1802, seventeen years, be it noticed, after the theory had appeared which is so commonly referred to as though it were the *result* of Herschel's observations instead of the occasion of them, that Herschel first began to present an entirely new view of the general structure of the universe. In the essay of that year he described the results to which he had been led by the study of double stars. As Struve has well pointed out, there was much in Herschel's work in this direction which naturally suggested the adoption of new views on the wider subject of the sidereal universe itself. He had begun to observe double stars, not with the idea of recognising any connection between the components of these objects, but on the contrary, in the belief that double stars are simply stars which, though really at enormous distances from each other, chance to lie nearly in the same direction as seen by the terrestrial observer. He conceived (independently, we may suppose, though Galileo and Christian Huyghens had anticipated him) the idea of determining the distance of the brighter, and presumably the nearer, member of such a pair of stars, by noticing how much the orbital motion of the earth caused the brighter star to shift in position with respect to the fainter (necessarily much less affected by the earth's motion if really much farther away than the brighter). It would be interesting to note how the prosecution of this task, begun long before 1784, gradually led Herschel to the conception of binary

* The paper of 1789 contained a list of 1000 nebulae discovered by Herschel, and was prefaced by a remarkable essay on the gradual development of stellar nebulae. The reasoning does not readily admit of condensation, and this part of the paper is too long to be quoted in full.

systems, and later to the certain assurance that there are many systems of this class in the celestial depths. Still more interesting would be the history of the steps by which he was led from the same starting-point, but on another course, to the discovery of the motion of our sun through space, and therefore to the recognition of that most stupendous of the phenomena presented by the heavens to us,—the motions of all the suns accompanied by their attendant systems through the interstellar regions. But these matters, full of interest though they are, must here be touched on only incidentally, in their relation to the processes of star-gauging, by which Herschel hoped in a more direct manner to ascertain the structure of the universe. It was natural that the recognition of binary stars,—that is, of pairs of stars not merely connected by an optical relation, but specially associated by the bonds of their mutual attraction, should suggest to Herschel the conception of other and more complicated systems, and that he should be prepared thenceforth to find in the star depths other relations than those which the analogy of our sun had suggested. Our sun is an insulated star, the components of a "binary" are associated stars. May not higher orders of association exist affecting other stars than those manifestly belonging to clusters or nebulae? For note that, although the conception of associated stars had already (as I have shown) been abundantly recognized by Herschel in the paper of 1785, yet the cases in which it had been recognized were those in which it was obvious at a single view; the study of double stars had led to the conclusion that stars not obviously associated, stars to which the method of star-gauging would have been applied without any suspicion, might be so near as to be bound together, and, as it were, separated from other stars by their mutual attraction. Herschel never applied his first method of star-gauging to any field of view containing a cluster of stars, in such sort as to infer from the large number of stars in the cluster an enormous extension of the sidereal system in the direction of that field of view. He himself pointed out the objection to such an inference—the fact, namely, that a cluster is manifestly a rounded group of stars, not a region of the sky which is rich because of enormous

extension in the line of sight. But until many double stars had been proved to be "binaries," or pairs of stars "whereof the one more bright is circled by the other," he would not have thought of excluding fields in which double, triple, and multiple stars were numerous. Now, however (in 1802), that he has to describe the recognition of binary stars, we find him for the first time drawing a distinction between insulated stars and all orders of multiple stars.

It is worthy of notice, especially by those who knew what interest Sir W. Herschel took in the subject of life in other worlds,* that he regarded the insulated suns as alone, in all probability, the centres of planetary systems resembling our own. "The question will arise," he says, "whether every insulated star be a sun like ours, attended with planets, satellites, and numerous comets? And here, as nothing appears against the supposition, we may from analogy admit the probability of it. But, were we to extend this argument to other sidereal constructions, or still further to every star of the heavens, as has been done frequently, I should not only hesitate, but even think that, from what will be said of stars which enter into complicated sidereal systems, the contrary is far more likely to be the case; and that probably we can only look for solar systems among insulated stars."

Observing, then, that in 1802 Herschel first presented the distinction between insulated stars and "those which enter into complicated sidereal systems," a capital interest attaches to whatever he might at that time say about the Milky Way. In 1785, he had so fully believed the Milky Way to be only the richer part of our sidereal system, that he took the name Milky Way as a convenient title for the whole system, and called those nebulae which he believed to be external sidereal systems "Milky Ways," as adequately distinguishing them from the clusters and nebulae which form parts of our stellar system. Let us see whether in 1802 he so viewed the Milky Way—for we may be assured that if he did, his views in 1802

* His discussion of the question, whether life can exist in our own sun, is, perhaps, the strongest extant proof of the interest which this subject had for him.

were in the main very much like those he had held in 1785, whereas if he did not, his views were greatly altered. His words are decisive on this all-important point:—

"The stars we consider as insulated are also surrounded by a magnificent collection of innumerable stars, called the Milky Way, which must occasion a very powerful balance of opposite attractions to hold the intermediate stars in a state of rest. For though our sun and all the stars we see, may truly be said to be in the plane of the Milky Way, yet *I am now convinced by a long inspection and continued examination of it, that the Milky Way itself consists of stars very differently scattered from those which are immediately about us.*"

So much as to the general and more important view of the question. It is clear that by the words, "a long inspection and continued examination of the Milky Way," Herschel refers to the seventeen years of observation which had followed the enunciation of the views he held in 1785. It is clear also from the words, "I am *now* convinced" that he had changed his views, apart from the proof of the fact which I have deduced from the comparison of his statements in 1785, with the results to which he had been led in 1802. "I mean, that no nice analysis of his words is required to show that in 1802 he came before the scientific world with entirely new ideas as to the construction of the universe; since he says as much very plainly,—*almost* as plainly as (we shall presently see) he stated the fact nine years later in the preface to the remarkable paper of 1811.

But let us see in what the change of view consisted:—

"On a very slight examination,"* he says, speaking of the Milky Way, "it will appear that this immense starry aggregation is by no means uniform. The stars of which it is composed are very unequally scattered, and show evident marks of clustering together into many separate al-

lotments. By referring to some one of these clustering collections in the heavens, what will be said of them will be much better understood than if we were to treat of them in a general way." He selects the fine portion of the Milky Way which occupies the lower half of the "Cross" in the constellation Cygnus (a group which may fairly be called the Northern Cross). Here he says "the stars are clustering with a kind of division between them, so that we may suppose them to be clustering towards two different regions. By a computation founded on observations which ascertain the number of stars in different fields of view, it appears that our space 'in Cygnus,'* taking an average breadth of about five degrees of it, contains more than 331,000 stars;† and admitting them to be clustering two different ways, we have 165,000 stars for each clustering collection. Now the above-mentioned milky appearances deserve the name of clustering collections,‡ as they are certainly much brighter about the middle, and fainter near their undefined borders. For in my sweeps of the heavens it has been fully ascertained that the brightness of the Milky Way arises only from stars, and that their compression increases according to the brightness of the Milky Way."

It is not easy to overrate the importance of the results embodied in the reasoning here quoted. Here are two rich regions of the Milky Way (which, according to the theory of 1785, indicated two projecting regions of the stellar system), now viewed as clustering collections, and selected as typical instances of want of uniformity in the structure of the Milky Way. They are not clustering collections in appearance only—that of course would have been no new fact, and would not

* That is the selected portion of the Milky Way.

† More stars in this small space, as viewed by Herschel's 18-inch reflector, than in the whole northern heavens, including this space as viewed with Argelander's 2½-inch telescope. And yet my chart of Argelander's results presents 324,000 stars as a collection bewildering in its richness.

‡ The reader's attention is specially directed to the fact that the clustering collections here spoken of are not telescopic small clusters. They are two of the cloud-like masses which the Milky Way presents to ordinary vision on any dark, clear night.

* One might pause here to ask whether, speaking as he does here of a "very slight examination," Herschel can be referring to results to which he had been led "by a long inspection and continued examination." But I think we need not find any difficulty in this, since results acquired with great labor may need but a very slight examination to indicate highly significant results.

have been worth announcing to the scientific world; but they are real aggregations of stars, surrounded on all sides by relatively vacant space. Between us, therefore, and these rich clustering regions, there lies a vast space not so richly filled with stars. The continuity of structure within the sidereal system, which constituted the very basis of the first method of star-gauging, is accordingly disproved. Thus the *first method of star-gauging is shown to be inapplicable in this case and in all similar cases. Moreover, the case being typical of the general want of uniformity in the structure of the Milky Way, the first method of star-gauging fails for the Milky Way itself, to interpret the nature of which it had been originally devised.*

If any doubt remain in the reader's mind as to Herschel's real meaning—if, for instance, it be supposed possible that Herschel may after all have referred to aggregation in particular parts of the heavens, as distinguished from aggregation in particular regions of space—then what Herschel proceeds to say respecting the great rich regions in Cygnus, can scarcely fail to remove all question as to his meaning. Yet, before quoting his words, I must premise that, again we have to deal with a passage which, though really unmistakable, requires careful attention before its real import can be apprehended:—

"We may indeed," he says (as if expressing hesitation, though really about to render his inferences more certain), "partly ascribe the increase both of brightness and of apparent compression" in these clustering regions, "to a greater depth of the space which contains the stars, but this will equally tend to show their clustering condition; for since the increase of brightness is gradual, *the space containing the clustering stars must tend to a spherical form*, if the gradual increase of brightness is to be explained by the situation of the stars." In other words, whether we consider the greater central richness as due to the clustering of the stars towards the central parts of these groups, or to the shape of the groups themselves, or partly consider both causes of central aggregation, we are still led to the conclusion that the groups are roughly spherical in shape.

As the whole theory of 1785 was concerned in the reasoning here presented, I cannot too specially invite the reader's attention to the result to which Herschel had

been led. I may illustrate the distinction between Herschel's views in 1802 and those which he held in 1785 in the following manner: We know that when a moderately thick low-lying mist covers a level plain, an observer placed on the plain sees through the mist above him, while near the direction of his horizon it is impenetrable, because the line of sight extends so much farther through it in such a direction. Now, let us suppose the case of a being—a visitant, let us say, from another world—not familiar as we all are with the appearances commonly presented by clouds, mists, or fogs, and introduced gradually to their various forms. If placed on a plain in the circumstances above described, he would readily convince himself that the impenetrability of the air towards the horizon was due to the fact that a mist within which he was himself placed had the shape of a flat stratum, so that where he looked along or nearly along the direction of the stratum's extension, the line of sight passed through a much greater range of mist. And we may conceive him attempting to determine the shape (the relative thickness and extension) of the misty stratum, by a method analogous to Sir W. Herschel's first method of star-gauging, estimating the extension of the mist in different directions by the apparent density of the mist in those directions. But now, suppose our observer introduced to a new state of things. Conceive him placed on a level plain, with mist enough low down to hide all terrestrial objects which otherwise might guide his eye, and that the sky for a considerable distance from the horizon is wholly cloud-laden, but not mist-enshrouded, the sky overhead being visible, with occasional cloud masses suspended there, while more and more clouds are in view the farther the line of sight is directed from the point overhead. We can readily conceive that the first interpretation he would assign to the observed appearances would correspond with the result of his former observations. He would suppose that towards the horizon there was a great extension of mist-laden air, and that there was also a great extension of misty matter towards those parts of the upper sky which showed an impenetrable cloudiness. He would not at first be prepared to conceive a state of things unlike that which he had formerly

recognized, or to suppose there was not as in that case a *continuity of mist-laden air* between himself and those regions where he perceived dense cloudiness. Gradually, however, the idea would present itself that the round-looking cloudy regions were really round in space,—not bounded merely by an apparent outline on the sky, but by a rounded surface, *outside* of which he, the observer, was placed. A variety of observations, so familiar to us that we hardly recognize the process of reasoning by which the mind becomes satisfied with their significance, would before long satisfy our observer of the justice of this conclusion. He would soon see reason to believe that not only the clouds seen separately overhead, but those confusedly intermixed towards the horizon through the effects of foreshortening, were in reality rounded masses of mist-laden air. Now, *just as markedly as the groups of clouds which are seen on a summer's day differ from a low-lying mist (so far as their relation to the observer is concerned) so completely does the system of great stellar clusterings recognized in the Milky Way by Herschel in 1802, differ from the stratum of stars, small clusters, and nebulae, of which in 1785 he supposed the Milky Way to be the foreshortened and the stars of our constellations to be the transverse view.*

But it does not follow that Herschel in giving up the most striking result to which his first method of star-gauging had seemed to lead, was bound to give up also the method itself. It had failed for certain cases, simply because the principle on which it was based was not applicable to those cases; but wherever there was any approach to the uniformity of scattering on which the method depends there the method might still be applied. Precisely as our imagined observer might still continue to test the shape and extension of a mist in which he found himself involved, by noting its apparent density towards different directions, abandoning that method only where he had reason to believe that cloudiness was due to mist within which he was *not* placed, so Herschel might still refer the richness of many of his star-gauges to great extension of stars in the corresponding directions, abandoning such inferences only where he had reason to believe that he was analysing the wealth of great clustering aggregations outside the

bounds of which our solar system is situated.

But although after 1802 Herschel still occasionally referred to his first series of star-gauges, we do not find that he any longer regarded them in the same light as in 1785.

As my subject now is star-gauging according to the two methods devised by Herschel, I scarcely feel justified in entering at any length into another striking feature of the paper of 1802. And yet it may be well to notice how marked Herschel's whole conception of the constitution of the universe changed at that epoch. Not only did he in 1802 advance his proof of the association between double and multiple stars, deducing thence and otherwise illustrating his inferences respecting wider laws of association, but he also selected this occasion to abandon the theory that the great irresolvable nebulae are composed of stars. He now regarded some among them as "possessing the quality of self-luminous, milky luminosity, and possibly at no great distance from us."*

* It is worthy of notice how readily a logically trained mind recognizes incongruities in results apparently presented with the highest possible authority. It is well known that Humboldt, quoting Arago's account of the results of Herschel's labors—so that the combined weight of these three names seemed to authorise the statement—presents our sidereal system as a "starry island, or nebula," forming a "lens-shaped, flattened, and everywhere detached stratum." Herbert Spencer, reasoning on the relations presented by Humboldt, shows the incongruity and absurdity of the statements (1) that this our island nebula has such and such proportions, and (2) that the nebulae are remote sidereal systems, whether we assume, with Humboldt and Arago, that the differences of star magnitude are due to differences of distance, or reject this assumption. In a letter written to a weekly journal on Jan. 31, 1870, Mr. Spencer, after quoting the passages in which he had shown this, remarks that "when they were written spectrum analysis had not yielded the conclusive proof which we now possess, that many nebulae consist of matter in a diffused form. But quite apart from the evidence yielded by spectrum analysis, it seems to me that the incongruities and contradictions which may be evolved from the hypothesis that nebulae are remote sidereal systems, amply suffice to show that hypothesis to be untenable." Thus, in this case Spencer was led by abstract reasoning to reject a conclusion which, so far as his authority could be trusted, had the combined weight in its favor of Sir W. Herschel's opinion, Arago's, and Humboldt's, and which astronomical authorities had never

In 1811, Herschel published another remarkable essay, mainly relating to the

been at the pains to question. Yet the conclusion to which Spencer was thus led on the comparatively slight evidence he possessed was, in reality, the same which Sir W. Herschel had adopted in 1802, after a score of years of persistent study of the heavens. Comparing the value of Spencer's abstract reasoning with that of the enormous mass of observed facts which astronomers had been collecting during a half-century since Herschel's day—so long as these facts remained unsifted—we find a curious illustration of the mistake made by those who would divorce observation from theory. In the same paper by Mr. Spencer, there occurs the following passage: "The spaces, which precede or follow simple nebulae," says Arago, "and, *à fortiori*, groups of nebulae, contain generally few stars. Herschel found this rule to be invariable. Thus every time that, during a short interval, no star approached, in virtue of the diurnal motion, to place itself in the field of his motionless telescope, he was accustomed to say to the secretary who assisted him, "Prepare to write; nebulae are about to arrive." How does this fact consist with the hypothesis that nebulae are remote galaxies? If there were but one nebula, it would be a curious coincidence were this one nebula so placed in the distant regions of space as to agree in direction with a starless spot in our own sidereal system. If there were but two nebulae, and both were so placed, the coincidence would be excessively strange. What, then, shall we say on finding that they are habitually so placed? (the last five words replace some that are possibly a little too strong). . . . When to the fact that the general mass of nebulae are antithetical in position to the general mass of stars, we add the fact that local regions of nebulae are regions where stars are scarce, and the further fact that single nebulae are habitually found in comparatively starless spots, does not the proof of a physical connection become overwhelming?" Here Mr. Spencer has deduced from the same facts which Arago and other astronomers have quoted in favor of the theory of external nebulae, the inference which Sir W. Herschel arrived at, as we may see from the passages quoted in pages 450, 451 of the first part of this essay (*Contemporary Review* for August). It is singular, however, how little weight the argument, from the improbability of repeated coincidences, here correctly applied by Spencer, has with ordinary minds. Michell employed this argument skillfully more than a century ago, in effect demonstrating the laws of association between certain groups of stars: but it was not till Sir W. Herschel had actually watched one star circling around another that even astronomers began to believe in such systems; and a third of a century later still, the idea was not accepted save by a few astronomers. Abstract reasoning must be strong indeed (and easy to follow, also) to overcome the inertia of slow apprehension.

milky luminosity which he had now recognized, not only in nebulous patches but spread thinly over large parts of the heavens, and had learned to distinguish from the milky light produced by multitudes of distant stars. His observations and deductions are full of interest, and especially interesting are his ideas as to the evolution of stars from the matter producing milky nebulous light. However, except in so far as they indicate his changed views respecting the constitution of the universe, these matters, worthy of study though they are in themselves, do not here concern us. There is one passage, however, from the essay of 1811, which cannot be too carefully studied by those who would rightly apprehend the nature and results of Herschel's work during the twenty-six years which had now elapsed since he enunciated the stratum theory of the sidereal system:—"I must freely confess," he says, "that by continuing my sweeps of the heavens, my opinion of the arrangement of the stars and their magnitudes, and of some other particulars has undergone a gradual change; and indeed, when the novelty of the subject is considered we cannot be surprised that many things formerly taken for granted should, on examination, prove to be different from what they were generally but incautiously supposed to be. For instance, an equal scattering of the stars may be admitted in certain calculations; but when we examine the Milky Way or the closely compressed clusters of stars, of which my catalogues have recorded so many instances, this supposed equality of scattering must be given up. We may also have supposed nebulae to be no other than clusters of stars disguised by their very great distance; but a longer experience and a better acquaintance with the nature of nebulae, will not allow a general admission of such a principle; although undoubtedly a cluster of stars may assume a nebular appearance when it is too remote for us to discern the stars of which it is composed."

It will be observed that in this passage Herschel abandons two of the principles on which his views in 1785 had been founded, the general uniformity of stellar distribution, and the theory that all nebulae, whether components of our system or external, are formed of stars. Each of the two principles here given up was essential to that theory (in its entirety), while the

first of the two principles was cardinal even as respects the general relations of the theory. Two links of the chain of ideas enunciated by Herschel in 1785 were now rejected (as in fact broken under the strain of observation). One of these, at least, had to bear so large a part of the theory, that with its failure the theory itself came to the ground.

It must have been, then, at about this time, certainly not later, that the necessity for a new method of star-gauging presented itself to Herschel's mind. He was, however, too busily engaged in observing nebulae and in endeavoring to detect the law of their development, to enter on any scheme of observation for determining the constitution of the universe. It is necessary to notice, however, before we pass to the new attack made by Herschel on the wider subject, that he now recognized a much more complete series of celestial objects than he had imagined in 1785. Then, and in the remarkable paper of 1789, he pictured various degrees of stellar aggregation, from uniformly scattered stars to the most compressed clusters. Now, he placed at the lower extremity of the scale of celestial objects the widely spread luminosity first noticed in the paper of 1802. He passed from this irregularly diffused nebulousity through all the orders of gaseous nebulae—irregular nebulae, planetary nebulae, nebulous stars—formed by the gradual condensation of the gaseous matter, until the star itself is formed; then, and then only, he entered on the part of the series earlier recognized, passing on to the various orders of stellar aggregation,—diffused clusters, ordinary stellar nebulae, and more and more condensed stars, up to the richest clusters. He no longer speaks of external nebulae. He introduces the paper of 1814 in these words:—"The observations contained in this paper are intended to display the sidereal part of the heavens, and also to show the intimate connection between the two opposite extremes, one of which is the immensity of the widely diffused and seemingly chaotic nebulous matter; and the other the highly complicated and most artificially constructed globular clusters of compressed stars. The proof of an intimate connection between these extremes will greatly support the probability of the conversion of one into the other."

For much that relates to the sidereal

heavens, Herschel refers in this paper of 1814 to the paper of 1785, and it may be that such reference has prevented most of his commentators from noticing how completely his views had changed. In reality it is only where he is speaking of insulated stars that he quotes the earlier paper. So soon as he deals with aggregations of stars, though he refers to the star-gauges of 1785 he no longer explains them as of yore. He dwells afresh on what he had written in 1802 respecting the clustering condition of portions of the stellar heavens. He explains that his expression "forming clusters" was "used to denote that some peculiar arrangement of stars in lines making different angles, directed to a certain aggregation of a few central stars, suggested the idea that they" (the former) "might be in a state of progressive approach to them" (the latter).* "This tendency to clustering seems chiefly to be visible in places extremely rich in stars. In order, therefore, to investigate the existence of a clustering power, we may expect its effects to be most visible in and near the Milky Way." I would invite the reader's special attention to the circumstance that the Milky Way is here pointedly referred to as a stellar region, distinct in its characteristics from the region of the stars forming our constellations. In studying Herschel's papers we have continually to be on the watch for indications of the sort, and although this particular view is not new, since he had expressed the same opinion in 1802, yet as Herschel was now very near the close of his observing career, it is important to notice that in this critical respect he retained the views which he had adopted in 1802.

Thirty years had now passed since Herschel had enunciated his first method of star-gauging, and as yet we have found no indication of a second method. But at the close of this paper of 1814 he mentions a new mode of research, by which he hoped to determine the laws according to which the stellar universe is constructed. "The extended views I have taken," he says, "in this and my former papers, of the various parts that enter into the construction of the heavens, have prepared the

* We may notice here, again, a certain inexactness in Herschel's manner of writing, accounting, perhaps, for the extent to which he has too often been misinterpreted.

way for a final investigation of the universal arrangement of all these celestial bodies in space; but as *I am still engaged in a series of observations for ascertaining a scale whereby the extent of the universe, as far as it is possible for us to penetrate into space, may be fathomed*, I shall conclude this paper by pointing out some influences which the continuation of the action of the clustering power enables us to draw from the observations that have been given."

We find Herschel, then, in 1814, preparing a scale whereby to gauge the extent of the universe, "as far as it is possible for us to penetrate into space."

But in 1814, Herschel reached his seventy-sixth year, and it was scarcely to be anticipated that he would live to complete in its entirety the task he had entered upon so late in his career—the most stupendous task which any astronomer had ever thought of undertaking. In 1784 and 1785 he believed that he had something finite to deal with; his telescopes reached as he supposed to the limits of the galaxy; he had but to gauge, by counting stars in field after field, to ascertain the shape of the sidereal system. Moreover he was then in the prime of life. Now, in his old age, the stellar system had widened on his view. Infinitely more complex than he had supposed, unfathomable (in parts at least of its extent) even with his mightiest instruments—how was he to hope in the few years remaining to him, to solve the mighty problem which he alone of all men who had ever lived had dared to grapple with?

There was no shrinking on his part, however, from the tremendous task which lay before him. He did not even allow himself to attack the work hurriedly. Thoughtfully he prepared the scale (the new method of gauging of which he had spoken in 1814), and not until 1817 did he describe the plan in detail, and with illustrative instances of its application.

The reader may be prepared, after what has been said at the beginning of this paper (*Contemporary Review* for August), to find the new method differing little from the method of 1784. He may think that, since the two methods have been confounded together by many, perhaps the second is the same as the first, but applied on a larger scale and with higher powers, or if different from the other is still closely related to it. So far, however, is this from

being the case, that the methods may be described as not only unlike, but even antithetical to each other.

In the first method the same telescope was to be applied successively to different parts of the heavens; in the second the same part of the heavens was to be examined successively with different telescopes. In the first method the stars in each field were to be counted; in the second, the observer was to note simply to what degree the telescopes successively employed separated from each other the component stars brought into view, or, in technical terms, to what degree the telescope effected the resolution of the stars in each field.

It seems to me tolerably clear that up to the year 1814, and possibly for a year or two longer, Herschel had been steadily advancing towards new and wider truths respecting the universe, and that the new method of star-gauging, as it first presented itself to his mind, was a well-considered means of attacking the great problem in the enlarged form to which it had grown. It is manifest that the higher the telescopic power we employ, the farther do we penetrate into the spaces surrounding us on all sides. It is, of course, probable (or rather it is certain) that many objects visible with a lower telescopic power may lie farther away than others brought into view with a higher power, because a very large star is visible from beyond depths which suffice to hide smaller but nearer orbs. Yet unless we assume that there are limits beyond which none of the larger stars exist, it is clear that each increase of telescopic power, by bringing into view new members of these larger orders, must carry our vision beyond the limits which it had before reached. And if we wish to form just conceptions of the structure of the universe, it seems manifest that our best, in fact our only available first step towards such knowledge, is to ascertain the aspect of the space surrounding us, as viewed with gradually increasing powers of vision. This, as I judge, was what Herschel proposed when, in 1814, he spoke of "fathoming the extent of the universe, so far as it is possible for us to penetrate into space."

But it is certain that the plan, as he began to carry it out in 1817 and 1818, does not correspond with this description. Nor does Herschel appear, in my judgment, to have worked in these years with his

former skill and acumen. Power was not wanting, but there is no longer the elasticity which hitherto had been so marked a characteristic of Herschel's mind. I think, too, that it will become manifest to anyone who carefully studies the whole series of Herschel's papers, that when he wrote these last two, the great array of facts which he had been so long engaged in gathering together was no longer present in its entirety to his mind. It must not be held to involve irreverence towards the greatest astronomer the world has known, to suppose that in his seventy-ninth and eightieth years his mental powers were not so great as they had been, and especially that his memory began to fail for facts observed during the preceding ten or twelve years of his life. Assuredly no honest student of science should allow his respect for the work of Herschel's former years to cause him to overlook defects, if such exist, in the reasoning with which Herschel's latest observations were accompanied.

It is not difficult to show that his reasoning in 1817 and 1818 was no longer so sound as in former years. He was now applying, be it remembered, a process by which he hoped to determine the relative distances of star-groups. Supposing that a particular clustering aggregation began to be resolved into discrete stars with a certain telescopic power, and was entirely resolved when a certain higher power was employed, there would be *prima facie* evidence as to the distance of the aggregation—because, given a group of stars of certain sizes and set at certain distances from each other, it is manifest that the farther away that group is placed the higher will be the telescopic powers required (1) to begin, and (2) to complete the resolution of that group into separate stars. But although such considerations may be reasonable enough when we are comparing two groups together, and even within certain limits when applied to different parts of the same group, there are circumstances under which their application to particular star-groups would be altogether incorrect, and which show also how unsafe the general principle is on which this particular method of star-gauging depends.

In order to show this, I will take as a typical instance a splendid pair of star-groups (not clusters properly so called)

which adorn the uplifted hand of The Rescuer, quoting Prof. Nichol's account of Herschel's study of this remarkable object: "In the Milky Way," he says, "thronged all over with splendors, there is one portion not unnoticed by the general observer, the spot in the sword-hand of Perseus. That spot shows no stars to the eye; the milky light which glorifies it comes from regions to which unaided we cannot pierce. But to a telescope of considerable power* the space appears lighted up with unnumbered orbs; and these pass on through the depths of the infinite, until, even to that penetrating glass, they escape all scrutiny, withdrawing into regions unvisited by its power. Shall we adventure into these deeper retirements? Then, assume an instrument of higher efficacy, and lo! the change is only repeated; those scarce observed before appear as large orbs, and behind, a new series begins, again shading gradually away, leading toward farther mysteries! The illustrious Herschel penetrated on one occasion into this spot, until he found himself among depths whose light could not have reached him in much less than four thousand years: no marvel that he withdrew from the pursuit, conceiving that such abysses must be endless!" The younger Herschel, speaking of instances such as these, where telescope after telescope has been directed to the same spot without apparently reaching its limits, says that here "we are compelled by the clearest evidence telescopes can afford to believe that star-strown vistas lie open, exhausting their powers and stretching out beyond their utmost reach, as is proved by infinite increase of number and diminution of magnitude, terminating in complete irresolvable nebulousity.

It was thus that the elder Herschel interpreted these wondrously rich spots in the papers of 1817 and 1818. Followed as he has been in this interpretation by Sir John Herschel, Struve, Grant, Nichol, and others, it may seem incredible that an argument practically resistless opposes itself to such a conclusion. Yet there is such an argument; nor has its strength ever been impeached or even questioned:

Repeatedly in his earlier papers, Sir W.

* A good opera-glass shows abundant stars in this wonderful group.

Herschel had noted the probability, rising almost to certainty in each individual case, and absolutely certain for many cases, that groups of stars which are rounded in appearance are roughly globular in reality, and that groups markedly distinct by their richness from *surrounding parts of the star-sphere* are really distinct as to richness from *surrounding parts of interstellar space*. If we consider the very group in Perseus which Herschel, as we have seen, regarded otherwise—or as a star-region extending away and away into space, along the track over which his telescopes of greater and greater power had carried him—we shall find abundant reason for that earlier interpretation. The group is much smaller in apparent size than the moon, but for the sake of argument imagine it as large. Conceive a cone having the eye as apex and just large enough to enclose the moon, extending out into space towards the great double cluster. Then, whatever else we may be in doubt about, we know quite certainly that the whole star-region examined by Herschel is enclosed within that long tapering cone. If his later principle of interpretation is just, the brighter and, as he judged, the nearer stars of the cluster are so far away within this cone that their light takes about a hundred years in reaching us—but say two hundred years to favor his interpretation (as will immediately appear) as far as possible. The farther parts, we have seen, he regarded, on the same principle, as so far away that their light takes 4000 years in reaching us, or twenty times as long. How much farther the star-region extends (on this interpretation) we do not know. But here we have the farthest known part, twenty times as far away as the nearest. Now, if anyone will make a very taper cone of paper (it should be a yard high if its base is only to be a third of an inch in diameter, or three yards high for a one inch base), and will cut off a twentieth part of its length, from the apex, the remaining part will show the shape of the region of space occupied, according to the interpretation of 1818, by the stars of the rich cluster. The paper frustum (still nearly a yard high, if the first of the above-mentioned sizes be adopted, and at its thickest part only a third of an inch wide), is, indeed, immensely exaggerated in width, long and slender though it seems. That wonderful group of stars, then, forms in reality, if rightly

interpreted by Herschel in 1818, a long, thin, almost cylindrical array of stars, happening by a singular chance to have its length directed exactly towards our earth! As there are two clusters, indeed, there are two such enormously long and slender arrays, thus strangely adjusted! And all other similar cases—of which Herschel cites no less than ten, while many others were recognized by his son in the Southern Milky Way—must be similarly interpreted.

The objections to such an inference are manifest; and in corresponding cases Sir W. Herschel had clearly recognized them. Note again, how Sir John Herschel disposes of such conceptions as being utterly improbable in the much less marked case of the two Magellanic Clouds. "Were there but one such object," he says, "it might be maintained without utter improbability that its apparent sphericity is only an effect of foreshortening; but such an adjustment, improbable enough in one case, must be rejected as too much so for fair argument in two." How much more, therefore, in the multitudinous instances presented by the clustering aggregations of the Milky Way.

The inference clearly is, then, that where Herschel had supposed (in 1817 and 1818) that he was fathoming or attempting to fathom the depths of stellar space, he was in reality only scrutinizing more and more closely, as higher and higher powers were employed, one and the same region occupied by many orders of stars—from suns perhaps surpassing our own many times in volume, down to orbs which, large though they may be absolutely, must relatively be regarded as mere stardust. I do not speak of this conclusion as doubtful, for it appears to me demonstrated. As the elder Herschel spoke of the two great clustering regions of Cygnus as spherical in shape, as the younger Herschel spoke similarly of the Magellanic Clouds, so may we justly say of these regions which had been regarded as the fathomless parts of our stellar system, that demonstrably they are "island star-systems," infinitely rich in stars, and infinitely varied in structure. We may indeed apply to them the very words which Sir John Herschel applied on sufficient but far weaker evidence to the Magellanic Clouds, "it must be taken as a demonstrated fact that stars of the seventh and

eighth magnitude, and irresolvable nebula" (not *nebulae*) "may coexist within limits of distance not differing more than as 9 to 10." The caution which this discovery should inspire when we are dealing with other cases where the evidence is less simple, need hardly be insisted upon.

Both methods of star-gauging had been tried, then, when Herschel ceased from his labors, and in one sense both had failed. It had been at least demonstrated that the principles by which Herschel had hoped to be able to interpret either method, were unsound. He himself established the fact that the stars are not spread throughout our system with such an approach to uniformity that one can estimate the extension of the system in different directions by counting the stars which one powerful telescope brings into view. He also collected the materials which prove that we cannot hope to estimate the distances of different parts of the system by testing with different telescopes the degree of stellar resolvability in those parts.

Is, then, the problem altogether hopeless? It seems to me that it is very far from being so, and that even where Herschel's methods seemed to fail, they afford excellent promise of success. His first method, for example, had to be abandoned so far as his original purpose was concerned, because he found reason to believe that the great rich regions of the Milky Way were situated like great clouds of stars in space, and are not mere ranges of stars extending continuously from our own neighborhood. But it was the method itself which taught this—which, in fact, effected this capital discovery. The second method, again, cannot be interpreted as Herschel hoped. It cannot tell us how far off, relatively, are different star-groups. But this application of the method has to be abandoned, simply because the use of the method itself has taught us that the architecture of the heavens is too complex to be interpreted in so simple a manner. Here, then, is another great discovery effected by a method of star-gauging which, so far as its original purpose was concerned, has had to be rejected. We have learned, from the seeming failure of the two methods, two important and interesting facts—first, that the stars are gathered into certain regions of space, and segregated from others; and, secondly, that where stars are so gathered they exist

in many orders of real magnitude, and are spread in different parts of such aggregations with very different degrees of profusion. Furthermore, over and above these valuable deductions, we have the observations themselves still available for use in other ways, still ready to reward whoever shall devote close and attentive scrutiny to them.

But it appears to me that so soon as we recognize the success of both methods in one sense, and their failure in another, a method of research presents itself which promises to combine all those qualities of each method which can really be trusted, and to be open to no objections. It was a grand idea of Herschel's to determine the varying richness of the heavens in different directions under the scrutiny of one powerful telescope. It was an equally noble occupation to watch the heavens "widening on man's view" with the widening pupil of the telescopic eye. Each method of research proved effective as used separately. But only by combining the two can the secret of the star-depths be mastered. We must not limit ourselves, however, to the study of a star-field here and a star-field there. With each telescopic power employed, the whole heavens must be surveyed. The results obtained with each power must be compared together, after being carefully indicated in suitable charts (since the most powerful intellect cannot grasp those results presented merely as statistics). Differential charts, showing *by how much* each increase of power increases in each region of the heavens the number of stars brought into view, must also be constructed. No preconceived opinions must be suffered to mar the teaching thus obtained; but the architecture of the heavens so disclosed must be viewed precisely as it is presented to us by these results: because, then, though it may be far too complex for our comprehension, we shall be less likely to be deceived than if we were prepared beforehand to recognize in it certain characteristic features.

This is a work in which almost every student of astronomy can help. Gaugings with small telescopes should by no means be neglected. Indeed, when we remember that the structure of the stellar universe is so complex and varied that some of the nearer parts cannot be analyzed to their inmost recesses, even by

the most powerful telescopes yet constructed, we see that our information about these parts can alone be brought near to completeness, and it is precisely about these parts that the smaller telescopes can give the most useful information.

I believe there is a great future for that noble domain of astronomy which Sir W. Herschel made the chief object of his study. By such methods of star-gauging as I have indicated—by the application of spectroscopy to distinguish the stars into

their various orders as respects physical structure—by the careful analysis of stellar motions, in order to recognize the laws of association—and by other methods of research, the stupendous problem presented by the stellar heavens may be hopefully attacked; and even should the observations directed to its solution fail, so far as their main purpose is concerned, there can yet be no manner of doubt that the collected results will be full of value and interest.—*Contemporary Review*.

A WITCH TRIAL IN THE FOURTEENTH CENTURY.

IN this paper we intend to follow the course which the trial actually took. Perhaps it would be possible to improve the story it tells by throwing it into another shape. But it is also possible that such a process might effectually destroy its value as an illustration of manners and superstition five hundred years ago.

We will suppose that our readers have paid a visit to the Châtelet—the Old Bailey of Paris—on Saturday, the 30th of July, 1390. Originally erected as a tête de pont, to cover the entrance of the city by way of the Bridge au Change, it consisted of a square keep, with turrets at the angles. Through its centre, straight to the bridge, ran a narrow passage, with heavy gates at its extremities. The last crumbling remains of the Châtelet were removed in 1792. But four hundred years earlier, though it was then so ancient that the date of its foundation had passed out of memory, it was still formidable. Like many another old fortification, the course of time, in removing it from the outskirts of the city to the centre, had turned it into a prison. Having surveyed its massy walls and grim old battlements, we penetrate through a number of gloomy corridors to the Grièche, or woman's cell. It is a low vaulted chamber of considerable extent—dim, damp, and unclean exceedingly. It has no furniture: a stone bench which runs round it serves as a seat by day and a couch by night. And yet this miserable lodging must be paid for, at the rate of two deniers a night, by those who cannot or will not pay a great deal more for accommodation hardly superior elsewhere. The authorities do not provide the prisoners with food. Of this, however, there is seldom any scarcity.

ty. Commiseration for the captive is one of the foremost duties inculcated by mediæval religion, and the bags which hang from the gratings of the Châtelet are filled daily with the contributions of the charitable. Besides, it is so common for the conscientious to traverse the city, at stated times, in search of alms for those in duress, that contemporary satire has seized upon the practice as one of the many characteristics of hypocrisy.

The prisoners in the Grièche are variously occupied. Some exchange blows, for here not only do they quarrel, but not unfrequently carry their contention to a fatal close. Some merely exchange coarse epithets. Some carouse, for here money will procure anything. And some—yoke-fellows in iniquity these—arrange their defence, and discuss the probabilities of conviction. The last is the occupation of the two committed on the charge of bewitching and poisoning Hainsellin Planete and his wife, Agnesot, of the Rue des Fosses St. Germain. One of the two, Margot de la Barre, *alias* du Coignet, is a hard-featured, determined-looking woman, between fifty and sixty, who, previous to her incarceration, kept a tavern of no good repute in the Rue Froidmantel, a street in the vicinity of the Louvre, as indeed are all the streets mentioned in this trial. The other, Marion la Droituriere, *alias* l'Estallée, is less than half the age of her companion, but of quite another exterior, being remarkably tall and thin. It is evident that she has been a gaudy bird at no distant date; but imprisonment has stripped off much of her gay plumage, and sorely bedraggled the rest. She is by profession what we would term "an unfortunate"—one of the highest class, however, being a mem-

ber of a singular body attached to the French court.

The gaolers appear, and Margot is led up to the hall of judgment. On this occasion the court is composed of the Provost of the Châtelet, his lieutenant, his auditor, the King's advocate, and six other personages learned in the law, termed examiners. The preliminary formalities are gone through and the trial begins. Margot is questioned on oath respecting her former life. She replies that she was born in the town of Beaune, in the Gastenois—that for many a year she had led a vagabond and an immoral life, "sometimes in one town, sometimes in another," settling eventually in the Rue Froidmantel. We may add, what was elicited bit by bit in the course of the trial, that during the latter portion of her career, the professions of sorceress, quack, and not improbably poisoner, had been conjoined to that of keeper of a house of dubious repute. Concerning the bewitchment of Planete and his wife she explains that the man was an old acquaintance, in the habit of frequenting her tavern with l'Estallée, his *amic*, up almost to the day of his marriage—an event which had taken place but a few weeks previous to the trial. "Immediately after the wedding," she goes on to relate, "I was informed by mutual friends that Agnesot was afflicted with a disease which caused her brain to exude through her eyes, nose, and mouth, and I was requested to do something for the poor woman. Then I bethought me of a certain secret which my mother had taught me in my youth, and I told these people that, with God to aid, I would soon relieve her. Taking a garland composed of herbs which I had purchased on the eve of St. John last past, I went to the Rue des Fosses St. Germain. On the way I paused to gather a bunch of shepherd's-purse,* which I saw growing near the hostelry of Alençon close by the Louvre, and which I twined in the garland as I went. Admitted to the bedside of Agnesot, I acquainted myself, as well as I could, with her malady. Then I said to her, '*Mon amie*, I gave you no garland for your wedding-day, but I give you one now, and I assure you that

you could not wear a better one. It is a garland to unbewitch yourself, or any other person upon whom a spell has been laid.' So saying, I twined the garland round her head, outside her cap. Then I repeated three *paters*, and as many *aves*, and crossed her in the name of the Trinity. Afterwards I said, 'Twice have I cast a blight upon you, and thrice do I remove it, in the name of the Trinity!'" The last sentence was a damning admission.

Concerning Hainsellin, she told that some days preceding her visit to his wife he had called at her tavern to request assistance for himself, who was then suffering from "fevers," and that, for the sake of old acquaintance, she had furnished him with a charm composed of shepherd's-purse, wrapt up in a white rag, which she directed him to carry on his person, promising that it would secure his recovery within eleven days.

To further questions she replied that she was totally ignorant of the art of witchcraft. When reminded of an admission made by her during the examination preceding her committal for trial, she denied, in the strongest manner, having ever said that she knew Agnesot to be spell-bound, or having made any remark at all concerning her, save that, within three or four days of putting on the wreath, a notable change would take place in her health.

Having heard all that Margot thought fit to state, the judges consulted thereupon. Then, "duly considering her former life, the contradictions between her various statements, the suspicious herbs found in her possession, the absurdity of a person pretending to reverse a spell who did not know how to impose it, and the extraordinary admission contained in her version of the formula which she had used when placing the garland on the head of Agnesot—they decided that, in the interests of truth and justice, it was necessary to put her to the question."

The last paragraph, which we have borrowed pretty exactly from the record, reads very legal and logical. But, we beg to assure our readers that it meant absolutely nothing. We have gone over nearly a hundred reports of trials which took place at the Châtelet about this period, without finding a single instance in which resort was not had to the question.

Margot was put to the question forth-

* The weed named was a noted ingredient in witch preparations. Aware of this, Margot endeavored to give its appearance in her garland the seeming of accident.

with "on the little bed and the great one," but not another word could be drawn from her. She was then released, chafed, as usual, in the kitchen, and then relegated to her cell. So far she had reason to consider herself safe. There was no decisive evidence against her. She thought she could trust her accomplice to keep silence, and the old sinner had not the smallest doubt concerning her own firmness.

On Monday, August the 1st, the court reassembled. There were present six members, two of whom had not appeared at the former sitting. This time l'Estallée was produced for examination, and with her several dumb but rather dangerous witnesses, consisting of one or two dried herbs, a piece of moss, and a lock of hair, which had been found in her box. She, too, was required to give an account of her former life in the first instance. The moss, she stated, had been given her as a *souvenir* by a former paramour, an English squire, who had gathered it with his own hands by the brink of a well where, according to tradition, a virgin had been beheaded. It was supposed to contain certain mystic virtues, and in return therefor she had given the squire a lock of her hair, for which scarcely as much could be said. One would have thought that such a token was hardly of the kind to pass between people like these; but such were the good old times.

Concerning Hainsellin, l'Estallée was sufficiently diffuse. She declared without the smallest reserve, or regard for womanly or legal decorum, and to the very beards of those "most potent, grave, and reverend signiors," that she had loved, still loved, and would continue to love him better than any man in the world, and, as she added with vehement passion, "better than any man that ever could be born into the world." The tuft of hair was his. Once on a time when he was leaving her, as she thought, far too soon, she tried to arrest him in a playful way. She seized his hood by one of the corners: he pulled against her, and thus the thing was torn off, and with it these hairs. He escaped for the time; but she wrapped up the hairs in the fragment of red cloth, and put the packet away among the things which she valued most.

She denied that she had ever gathered any herbs for magical purposes, or that she had ever uttered a threat concerning

Hainsellin. She admitted that his marriage had grieved her exceedingly—more, far more, than anything that had ever before befallen her. And she admitted having said that he would have reason to rue the day—not as a threat, but because she knew full well that never, never more would he find any woman in this world to sacrifice herself for him as she had done. This was all that she had to say, and she was sent back to her cell.

The court was by this time increased to eleven—the five fresh members probably having been all attracted to the Châtelet by the unusual interest which the trial began to assume. A good deal of discussion among the judges followed the departure of Marion. Its very length shows that it was not altogether unfavorable to her. In the end it was decided that she, too, should be put to the torture, but not until Margot had been subjected thereto a second time. The crone therefore was summoned, and stretched on the rack. But the stern persuasions of the small bed and the great one had not the smallest effect on her obstinacy. So ended the doings of the day.

There was no court on Tuesday; but on Wednesday, the 3rd of August, its members assembled to the number of seven, and Marion was led before it. The proceedings opened with a little "scene." When the principal torturer, Oudin de Rochefort, seized the woman to prepare her for the iron couch, she burst from his grasp, and treated the worshipful magistrates to not a little of her mind. She warned them, with suitable gestures and interjections, to "mind what they were about in dealing thus with a woman of good fame." She declared, with deep earnestness, that she was entirely ignorant of the charges brought against her. And she closed as neat an oration as was ever delivered under such circumstances, with an appeal to the Court of Parliament.

Such an appeal, even from such lips, was not to be disregarded. The work of torture was suspended, and notice of the appeal was transmitted to the body concerned, which, as it happened, was sitting at that moment. The message received prompt attention, and the messengers—the honorable and learned Master Pierre Lesclot, and the merely learned Master Guillaume Porel—both members of the Court of Parliament, as well as of the

Court of the Châtelet—were sent back on the instant, with full powers to decide as to the validity of the appeal. So quickly was all this done, that the examination was resumed and carried through the remainder of the stage that same day. Clearly old French law had not yet put on those tedious forms of which Hamlet complains so bitterly.

Her appeal being disallowed, Marion was placed on the rack—but no further confession could be drawn from her. She was then removed, and Margot was brought up from the Grièche, and tortured for the third time. The old tavern-keeper, however, proved no more yielding than heretofore, and the court adjourned.

The next day l'Estallée was ordered to be questioned by water. This torture was much the same in 1390 as when it was witnessed by Evelyn, in the same place, in 1651. Here, according to the diarist of Say's Court, the wrists of the malefactor were bound with a strong rope, or small cable, to an iron ring in the wall, about four feet from the floor. Then his feet were fastened with another cable "about five foot farther than his utmost length, to another ring on the floor of the room. Thus suspended, yet lying but aslant, they slid an horse of wood under the rope that bound his feet, which so exceedingly stiffened it, as served the fellow's joints in miserable sort, drawing him out at length in an extraordinary manner, he having only a pair of linen drawers on his naked body. Then they questioned, which not confessing, they put a higher horse under the rope, to increase the torture and extension. In this agony, confessing nothing, the executioner with a horn—just such as they drench horses with—stuck the end of it into his mouth, and poured the quantity of two buckets of water down his throat and over him, which so prodigiously swelled him, as would have pitied and affrighted any one to see. . . . It represented to me the intolerable sufferings which our Blessed Saviour must needs undergo when His body was hanging with all its weight upon the Cross." The torture thus faithfully described was so terrible that few ever endured it beyond the first stage, and so it happened in this instance. Before a single drop of water could be poured upon her Marion was vanquished by her sufferings, and entreat-

ed to be released, promising to tell all. Her desire was complied with. "Then," writes the greffier, with nauseous affectation of mildness, "without the slightest constraint of the gehenne"—the appropriate name by which judicial torture was known—"she confessed all that she had ever practised of philtre or witchcraft."

Four months, or thereabouts, before, she and Marion la Dayme, a Fleming, and a daughter of sin like herself, "being together drinking and discoursing of their lovers," she, l'Estallée, held forth in praise of Hainsellin as the dearest, tenderest, most loveable sweetheart in the world. La Dayme was equally warm in eulogising one Jehan de Savoy, who held the honorable post of tailor to the Duchess of Touraine. As thus they conversed, the Fleming communicated a secret whereby a lover might be made more loving. The greffier has given it at full length, and, like other such secrets, it is perfectly vile and disgusting. But l'Estallée was a daughter of sin, and besides infatuated to insanity with Hainsellin. She therefore put it immediately in practice, though with the utmost fairness, since she applied it to herself also. Thus she gave good proof of the excess of passion that possessed her—by desiring to render it still more excessive. The utter worthlessness of the stuff was soon apparent. In a day or two it came to her knowledge that Hainsellin was affianced to another; and worse still, that the wedding-day was at hand. Then she hastened to la Barre—the prime confidante of this, the amour of her life—in a state of frenzy. The hag attempted to soothe her with old saws—dwelling especially on one which said that no good ever came of a marriage between two ribalds,* from which it would seem that Hainsellin had promised to wed his *amie*. As usual, wise saw failed to curb wild passion, and the tavern-keeper was compelled to resort to another device. Binding the furious woman by oath on oath—never to breathe a syllable of the secret about to be disclosed, she whispered that she was well acquainted with an art greatly dreaded in those strange times. She went on to mutter that she was willing to exercise it in Marion's favor, somewhat in pity, but more in friendship, and, as it proved, a

* "Peu de gents ont espousé des amies, qui ne s'en soyent repentis."—Montaigne.

little for reward. Before, however, proceeding to such an extremity, Margot advised her client to try a mode of recalling truant lovers to their allegiance, which, as she asseverated, she had never known to fail. It consisted of a powder, absurdly composed, part of which was to be mixed with wine, and part wrapt up in a down pillow. Of the wine the lovers were to partake. As to the pillow, it was to be reserved for Hainsellin's use alone, for the touch of a female cheek would quite dispel its virtues. L'Estallée observed the directions very exactly. And Hainsellin gave her full opportunity: for, with unutterable meanness, this consummate sneak kept up his acquaintance with the ribald to the very last. "But," sighed the impassioned girl, "this philtre proved as useless as the other. I saw very clearly that Hainsellin loved just as ever, and not a particle more fondly."

Then l'Estallée went on to speak of the wreath—or rather wreaths, for there had been two. Visiting the market on the eve of St. John to purchase some roses *d'outre mer*, and some other flowers, "wherewith to decorate her person, as was the custom of young women at that season," she bought, among the rest, a bunch of that weed of dark repute, shepherd's-purse. On her return from the market she called, as usual, at the tavern. Then Margot observed the shepherd's-purse, and said that, by its means, she could work in such form as should cause Hainsellin to abandon the wife he was about to wed, and return to Marion. The weed we need hardly say at once changed hands, and a bargain was struck. The beldame promised to weave the shepherd's-purse into two garlands, one for the bridegroom and the other for the bride, which would certainly effect the purpose which l'Estallée had so much at heart.

At last arrived the week preceding Hainsellin's wedding. It was fixed for the Sunday, and on the Thursday or Friday before, she could not well remember which, Marion called on her friend. Margot bade her hope on, repeated her promise respecting the garlands, renewed the oaths to secrecy of the unhappy ribald, and imposed another to the effect that she would bring as many customers as she could to the tavern. Then she whispered that the garlands would be ready on the Sunday, when Marion would receive

them, along with ample directions for their use.

Here, as often in the course of this report, the dull, dry greffier becomes a most attractive story teller. It is unintentionally indeed; he merely gives the more important items of the evidence in the usual matter-of-fact style of such people. But the details, like all those into which human feeling enters deeply, possess an interest of their own which needs no aid from the artifices of style.

The confession went on to relate—how on the morning of the Sunday, when her *amie* was to wed, Marion rose early—how, sitting sadly by her lattice, she saw Hainsellin pass and saluted him—how, when the marriage hour drew nigh, she felt constrained to go and witness the procession on its way to church—how she followed it thither, and remained, with what feeling we shall not attempt to guess, until the ceremony was over—how, when it was over, she stepped forward before the company, with that stoicism which intensest passion can so strangely assume, and saluted the pair, "*bien et doucement*,"—how afterwards she accompanied the party back to the hostelry of Alençon, where it was to spend the day in revelry—and how, quitting it at the door of the hostelry, she returned to her lonely chamber.

To Marion that day was emphatically the day of darkness which, according to old-world superstition, everybody is compelled to undergo at least once in life. A miserable day, a terrible day, a day of impotent fury, hopeless sorrow, and withering remorse, every one of whose incidents burns its impression deep into the memory.

In her chamber, l'Estallée remained for hours—brooding over guilty woes, and writhing under the lashes of the Furies. There, in the very focus of human suffering, she sat, the realisation of the picture so powerfully painted in the *Giaour*—

Darkness above, despair beneath,
Around her flame, within her death.

"Two hours after midday" she thought her of the promise of la Barre, and hurried to the Rue Froidmantel, where she conducted herself as one possessed—wringing her hands, gesturing wildly, rending her hair and her garments, and sending forth fierce complaints which were not altogether without founda-

tion. From the evidence it appears that Hainsellin dealt with her as such scoundrels deal with such women. He had used her money as unscrupulously as her affections. He was even indebted to her for his life. In a dangerous illness, wherein he had no one else to look to and no other shelter for his head, she had conveyed him to her lodging and nursed him herself carefully and tenderly back to health. Poor l'Estallée! wicked she was, and immoral in the extreme, but still thoroughly devoted and self-sacrificing—excellent in that which makes the most excellent quality of woman—who does not pity her?

Having subsided into something like composure, Marion was again sworn to secrecy by the beldame, and the garlands were produced. "Holding them in her left hand," narrated the unfortunate, "she crossed them with her right, while she muttered over them some words too low for me to hear. Then she handed them to me with these directions—'Go to the hostelry where the marriage feast is held, and when you see the married couple join in the dance, make some excuse—such as stooping to tie your shoe, or to pick up something you have dropped—which will enable you to place the garlands in their way without exciting attention. If you so manage that they shall tread upon them, I promise you that your wish shall be accomplished.'"

Here, as Marion asserted, she was seized with a scruple. She, whose life was one round of mortal sin, actually shrank from imperilling her precious soul by following the instructions of the ogress. That the scruple was real we do not doubt; over and over again have we witnessed the like. But when Margot answered her that the garlands were, and would remain, perfectly harmless to every one but the bridegroom and the bride, her scruples evaporated, and she consented to go through with the sorcery.

Concealing the things beneath her dress, Marion hastened to the festive scene. There she found the company footing it with plebeian vigor. And there, thanks to the easy manners of the period, she found no difficulty in joining the dance—having a partner whom the greffier has not forgotten to describe with execrating precision as one-eyed Thomas, a familiar servant of the Duke of Touraine. And

here we must pause to protest against that habit peculiar to the law, which will persist in taking advantage of the trial of a thorough-paced scoundrel to consign to immortality all the more unpleasant peculiarities of respectable people.

In the course of the evening, Marion managed to deposit her garlands. Having no further business there, she went home to supper; and after supper she hastened to the tavern to report progress, and be again assured of success.

The Monday and Tuesday following "the unfortunate" spent in an excursion to Montmartre. There some gossip respecting the newly married led her to think that the spell had failed. She returned, therefore, to Paris exceedingly downcast, to be reassured by a report—a true one, as it happened—that bride and bridegroom were ill, the latter alarmingly. This, with the addition of a conversation in which the ogress continued to laud her nostrums and to encourage the hopes of her dupe, was the end of this unparalleled confession.

Margot was confronted with Marion, whose depositions were read over to her. To everything contained therein the crone gave the most unqualified contradiction. "And saying and affirming upon her oath that the deponent had lied most maliciously and foully, she challenged the said Marion to single combat, and threw down her gage."

Here it may be remarked that the peculiar form of trial, termed by battle, was then in full swing. Not quite four years before, all Paris had witnessed the celebrated duel between Carouge and Legris; and though it was usual for women who challenged, or accepted challenge, to appear in the lists by deputy, they were at full liberty, as many instances show, to refuse championship, and do battle in person.*

In this instance the duel was at once refused. Then Margot attempted to prove an *alibi* with respect to the events which told most heavily against her, but managed merely to elicit further proof thereof. This, however, was not yet considered convincing; and, to procure what was needed, it was determined to torture both the prisoners once more. They began

* See *The Cornhill Magazine* for December 1870, p. 737.

with Marion, who adhered to her last confession. She, therefore, was soon released from the rack, which closed the proceedings for that day.

On Saturday the prisoners were re-examined. Marion confirmed her confession, and attributed her early denials to the oaths which the ogress had induced her to take, and also to the persuasions of the latter during their confinement together. She added, that her tortured and weakened limbs had given her good cause to regret her obstinacy.

Margot was now ordered to be questioned by water; and here, like her predecessor, she gave way before a single drop of the fluid could be employed. Her confession was as ample as could be desired; it was in great part a recapitulation of that of l'Estallée. What was new therein referred exclusively to matters of sorcery, and ran as follows:—When about to deliver the garland to Marion, she described herself as calling up the demon in these words: "Enemy, I conjure thee, in the name of the Father, and of the Son, and of the Holy Ghost, that thou come hither to me!" "Then," said she, "I made a third and smaller garland, which I threw on a bench behind me. Immediately afterwards, when I was about to cross the larger garland, I saw, at my elbow, an enemy of the form and fashion of the enemies who appear in the passion plays, with the exception, that this one had no horns. He asked what I wanted with him. I replied, 'I give you yonder garland on condition that you plague Hainsellin and his wife in such a way that Marion shall have full reparation for the wrongs they have done her.' Then the enemy departed, bearing with him the little garland. I saw him fly out through a window that was open in the chamber with a noise like a whirlwind, and I was much afraid."

Being questioned still further of the invocation of fiends—a matter concerning which the judges displayed an extremely puerile curiosity—she replied by relating a circumstance which had occurred some twenty-four years before. "Being in the fields under Montmartre, with a daughter of sin like myself, we began to tell of our lovers. Then this girl, who was a Fleming, but whose name I have forgotten, taught me how to invoke the devil. And then and there did I invoke him as she

instructed, crying out, 'Devil, guard and aid me and my lover (whom I named), so that he may never love any but myself!' When I had spoken, somebody, whom I could not see, replied, and in my terror I ran and hid myself in a little hut that we had constructed with turf and brambles."

Concerning the Satanic portion of the old tavern-keeper's confession, it is but right to remark that her judges had evidently made up their minds that something of the kind must have occurred, and that they were as evidently determined to tear that something from her lips, even though they should rack her asunder in the process. The victim of her own cunning and sordidness saw clearly that her fate was decided, and, to preserve her wretched limbs from unnecessary suffering, she concocted the stories whose outlines we have given.

On Sunday, Margot was re-examined alone; and on Monday, in company with Marion. She was found to adhere steadily to her confession; nor did her companion recall aught that she had said.

Finally, on Thursday, the 9th of August, the pair were brought up for judgment. The court was a full one, numbering full twenty members. They were unanimous in condemning la Barre to be exposed in the pillory, and then burnt as a witch. With respect to l'Estallée, there was a difference of opinion. Five of her judges would fain have substituted banishment for the fatal penalty; but, as three-fourths of the assembled sages voted for death, the merciful intentions of the minority were frustrated. The sentence was executed on the instant. Years had yet to elapse before the exertions of a great penitent, who in his day had been a mighty sinner, Pierre Craon, could succeed in procuring for criminals condemned to death the solace offered by religion. The two, therefore, were hurried from the judgment-hall to the pillory, and thence to the stake and their long account—

Unhousel'd, unanointed, unanel'd:
No reckoning made,
With all their imperfections on their head.

As to Hainsellin Planete, who repaid the sacrifices and rid himself of the importunities of a devoted mistress by doing her to death, no further mention is made of him.—*Cornhill Magazine.*

TWO GERMAN CRUSOES.

IN the Atlantic, about midway between the coast of South America and the Cape of Good Hope, in $37^{\circ} 6'$ south latitude, lies the island of Tristan da Cunha, with two lesser islands in its neighborhood. The *Challenger*, H.M. ship, commanded by Captain Nares, now on a scientific expedition, reached Tristan da Cunha late at night, on the 14th October, 1873. Next morning, a landing was effected, and the island, which is nineteen or twenty miles in circumference, was found to have a settlement of eighty souls in all. The history of this little colony is curious. In 1816, a company of British artillery was stationed on the island, with a view to keep watch on Napoleon Bonaparte, then in captivity in St. Helena. It seems almost ridiculous to have taken this precaution, for St. Helena is about thirteen hundred miles distant, and one would think the guard could have been of no avail. Perhaps it was thought, that in the various mad schemes to rescue Napoleon, Tristan da Cunha might have been made a base of operations. When the illustrious captive died in 1821, the British soldiers were withdrawn, leaving only a corporal of the name of Glass, with one or two companions, to take charge of the small fort that had been erected.

From his name, we should suppose that Glass was a Scotchman. At all events, he cleverly adapted himself to his position. The land being fertile, he set to work, cultivating potatoes, cabbages, and other vegetables, bred goats and pigs, and made a business of selling these vegetable and animal products to captains of ships who in passing stood in need of fresh provisions. Known as Governor Glass, he became a man of note in the South Atlantic. The settlement over which he bore sway thrived apace. In 1829, it amounted to twenty-seven persons—seven men, six women, and fourteen children. They had three hundred acres of land in tillage, and extensive pastures, with seventy head of cattle, a hundred sheep, and innumerable goats, pigs, and poultry—altogether a thriving concern, though a little solitary. In due course, Governor Glass died, but the settlement continued, and still continues; presenting one of the many examples of

the success attending English colonization, on however small and unassisted a scale. Since the decease of Glass, there has been no recognised chief. The oldest man at present, Peter Green, is at the head of affairs. When ships touch at the island, Peter acts as spokesman and salesman. There is now more stock in trade to work upon than in early times; for the cattle have increased to six hundred, and there is an equal number of sheep. As ships can generally exchange quantities of teas, sugar, flour, and other articles for the produce of the island, a pretty brisk trade in the way of barter is carried on. The islanders also have some commercial negotiations with the Cape of Good Hope, where they find a market for their wool.

It was at this thriving little settlement, as has been said, that the *Challenger* arrived in the course of its cruise. The account of what was seen and learned on the occasion, has been given by Captain Davis in *The Geographical Magazine* (August, 1874), and is so interesting, as regards the rescue of two Germans, named Stoltenhoff, from one of the islands of the group, that we feel pleasure in condensing it, for the benefit of our readers.

In 1870, the younger of the two Germans, a sailor, had been wrecked, and with some companions was treated hospitably at Tristan da Cunha. Taken off by a ship, he was brought to Europe; but finding his family ruined by the war, he determined to return, bringing his elder brother with him. The two brothers accordingly carried out their resolution of trying to reach and settle in the small English colony.

'At St. Helena,' proceeds the narrative, 'they expended their little stock of money on an outfit suited to their new life, and among other necessities became the owners of an old whale-boat, the best they could get for the money at their disposal, and in November, 1871, embarked with all their treasures for Tristan da Cunha, in the American whaler *Java*, Captain Mander. On the passage, the captain, from some unexplainable reason, worked so strongly on the minds of his passengers as to persuade them to land on Inaccessible Island, instead of the one they were bound to. Captain Mander described

the island as fertile, and having a valley that led from the beach to the summit, and that on all occasions when he had landed he had seen numbers of wild pigs and goats.

'The brothers were landed on the 27th November, 1871; their stores consisted of their whale-boat, some rice, flour, biscuits, sugar, tea and coffee, some salt, a little tobacco and pepper, and a small supply of spirits and wine, some empty barrels for oil, lamp, matches, a rifle, fowling-piece, shot, powder, &c. They also had a few tools, a wheel-barrow, cooking utensils, some seed-potatoes and garden-seeds, a dog and pups, &c. Their library consisted of eight or ten volumes of very miscellaneous reading, with which they got intimately acquainted before they left the island.

'They were landed on the shingle beach on the west side of the island, from which, by a ravine, there was very difficult access to the summit of the cliffs. Four days after they landed, a party of sixteen men, in two boats, arrived from Tristan da Cunha. The *Java* had been becalmed off that island, and the captain had given information of the landing of the two brothers, and as the sealing season had set in, the Tristan da Cunha men set out at once for Inaccessible Island; they behaved with much kindness to the brothers, pointed out that the position they had chosen on the north-west side of the island exposed them to prevailing winds, and advised them to shift their quarters to the north-east side, which they at once agreed to do, and the Tristan da Cunha men took all their stores round, and showed them how to build a hut, and soon after left them, promising to visit them at Christmas; and the brothers at once set to work building their house near a waterfall, clearing the ground, and planting their seed, and otherwise making preparations for a long stay. Firewood was plentiful, and by aid of the long grass they could reach the summit of the island, where there were about four miles of broken, uneven ground. The beach was about a mile long, with a strip of ground back to the foot of the cliffs.

'Using the boat, they captured nineteen seals. The first house they built failed to keep out the rain, and they had to build another; but while thus working hard at their house and plantation, they

were quickly consuming their store of provisions without replenishing it, and they soon became fully aware that the time would arrive when they must be entirely dependent on home produce. They occasionally used their boat in sealing, but unfortunately she was too heavy for two men to handle, and got so damaged that they could only keep her afloat by constantly bailing. This was a momentous event to the poor fellows, as, in the beginning of April, 1872, the tussock-grass growing on the cliff at the back of their hut, and by means of which they were enabled to get to the summit of the island, accidentally caught fire as they were clearing the ground by burning, and the only way left them of ascending was by going round to the north-west side in their boat: thus by the accident to the boat their means of subsistence was cut off; however, nothing daunted, they cut their whale-boat in two, and built up a stern on the best half, and christened their extraordinary looking craft the *Sea-cart*, and by means of the *Sea-cart* they were enabled to get round the point and to the summit of the island, on which were pigs and goats; they found the flesh of the latter extremely good, but that of the pigs was unpalatable, owing to their feeding partially on sea-birds.

'On the 14th of May, an English ship hove in sight, and a fire was lighted to attract attention, as their boat was not safe to go outside the kelp in. The captain afterwards reported at Tristan da Cunha, that he had seen two persons on the island, also a square-sterned boat, but that no one came off, and that there appeared to be too much surf for him to attempt a landing.

'The poor fellows' hearts sunk within them as they saw the ship bear away from the island, as winter was setting in on them with heavy gales and much rain; moreover, in one of the gales, their *Sea-cart* was washed off the beach and wrecked, leaving them no means of getting to the accessible side except by swimming round a high bluff: this great loss occurred in June. In May they dug their potatoes, and in the following month some of the other vegetables were fit for food; but being unable to reach the top of the island, the store of provisions ran short, and towards the middle of August the two brothers were greatly reduced in strength. Although fish could be caught in plenty

a little distance from the shore, but few could be taken from the rocks, so that the loss of their boat stopped that means of supply.

'In the middle of August, the male penguins landed to prepare their nests for the season, and at the beginning of September were followed by the females, who began laying; the day before this happened, the brothers had eaten their last potato, and, but for the timely supply of eggs for food, they would have perished.

'In September, a passing French vessel communicated with them, and, in return for some penguins' eggs, they obtained about half a hundredweight of biscuit, and were disappointed of a further supply of stores by the captain putting to sea. In October (1872) a sealing schooner, named the *Themis*, communicated, and landed six men from Tristan da Cunha. The captain of the *Themis* gave the brothers a small quantity of salt pork, biscuit, and tobacco. On leaving, the captain promised to return in a few weeks' time, but did not do so. At the end of October, the supply of penguins' eggs failed, and on the 10th of November the biscuits and pork were finished, and necessity obliged them to make preparation for swimming round the bluff in search of food. Their powder, matches, and other things requiring to be kept dry, were secured in a cask, which they towed round the bluff. The night was spent at the foot of the cliff, and the following day, with great difficulty, they succeeded in reaching the ridge, and, crossing over to the west side, descended to their first landing-place. A pig was shot, and they enjoyed a hearty meal of fresh meat, the first they had partaken of for many months. In this way they lived until the 10th of December, having shot six goats. A hut was built at this time on the plateau, to shelter themselves when hunting.

'An American whaling schooner visited them, from which they obtained some small supplies, but they would not take that opportunity of leaving the island, expecting the return of the *Themis*. A party of Tristan da Cunha men also landed on the west side, and captured no fewer than forty seals. During the stay of the party, they shot eight of the remaining twelve goats, and, on leaving, assured the brothers that the *Themis* would most certainly call the next month. Although anxious to

leave the island, the brothers were unwilling to go to Tristan da Cunha, feeling that they would not be welcome. For ten months they were without communication with their fellow-men.

'In January, 1873, Frederic again swam round the bluff, mounted the cliff, and succeeded in shooting four pigs; these were thrown over the cliff to the brother below: he refrained from shooting the remaining four goats. At the end of the month, Frederic rejoined his brother, and the day after he did so a party from Tristan da Cunha landed on the west side, and either shot or caught the remaining four goats, which they took away with them. They did not communicate with the Germans, and as this was intentional, the brothers considered that their object was to drive them from the island. Probably the Tristan da Cunha people considered that their residing on the island interfered with their hunting-ground; at all events, after their kindness to them on arriving on the island, their conduct was at least inexplicable.

'In February, potatoes and other vegetables, mixed with pigs' fat, formed their daily food; but in March, that food being exhausted, another visit was paid to the plateau, and the goats were then missed, which they had abstained from shooting, but they shot several pigs. At this time, their one great comfort, tobacco, failed, and this to a German is more than we English should feel; they tried to replace it by dried leaves, but without success.

'The dogs which they had brought on shore broke loose, and played sad havoc among the penguins, killing great numbers, and as one was apparently mad, the three were shot. It was now decided that the brothers should separate for a time, the elder to remain on the plateau to provide food, whilst the younger remained below to melt down and store the fat, and attend to the clearing; the want of salt prevented curing the flesh. Three young pigs had been caught and got down the cliffs without injury, then secured to a cask and towed round the point, but were nearly drowned on their passage; they were placed in a sty, and fed with grass and what could be spared from the garden, and also with penguins' eggs, when procurable.

'At the end of April, the elder rejoined the younger, and in the attempt to convey

two more pigs round the bluff, was nearly drowned; the pigs were. In June, Frederic again went to the plateau, and remained there until the 18th of August; the brothers were not altogether without communication during that time, for, excepting when the noise of the wind or surf prevented, they could hold a kind of conversation. In June, July, and August, they lived on pigs' flesh only; the penguins then began to lay, and in their eggs they had abundance of food.'

Evidently, this precarious mode of life could not last. The brothers had made a grievous mistake in not following out their original intention of settling in Tristan da Cunha, and subsequently they committed

a serious blunder in not taking the earliest opportunity of leaving a spot where they endured a series of extraordinary hardships.

At length they had the good fortune to be happily rescued. The captain of the *Challenger*, when at Tristan da Cunha, having heard that two Germans had landed on Inaccessible Island, twenty miles to the south-west, two years previously, feared they were in difficulties, and went to their succor. The ship arrived at the island on the 16th of October, found the two unfortunate exiles, took them on board, and carrying them off, terminated their wretched Robinson Crusoe-like existence.

DEAN STANLEY,

BY THE EDITOR.

ARTHUR PENRHYN STANLEY, familiarly known as "Dean Stanley," is at the present time Dean of Westminster, and, as leader of what is called the "Broad-Church" party, is one of the most distinguished divines in the Church of England. His liberal views on ecclesiastical matters and his fame as a preacher have brought him very conspicuously before the public interested in the religious movements of the time; while his almost equally successful achievements as an author have made his name familiar to the great body of readers both in England and America. Readers of the *ECLECTIC* have seen in our pages so many specimens of his work as writer and lecturer, and so many references to his career, that it will not be necessary for us to give here more than a brief mention of the leading incidents of his life.

He was born in Alderley, England, on the 13th of December, 1815. His father was also a clergyman in the Church of England, who attained considerable success in literature, and something like notoriety for his religious views—which were of so liberal a character that he was accused of latitudinarianism. Young Arthur was educated at Rugby at the time when Dr. Arnold had charge of the school; and for his subsequent distinction and bent of mind, he has always felt himself indebted to the early ministrations of that great and good man. In 1838 he was graduated at University College, Oxford, where for sev-

eral years afterward he held the position of tutor. In 1851 he was appointed one of the canons of Canterbury; and, about the same time, he became chaplain to the late Prince Albert. In 1856 he was elected regius Professor of Ecclesiastical History at Oxford; and about four years ago he was appointed to the much coveted post of Dean of Westminster, part of his functions being the custody of England's most famous monuments, and the decision as to who are entitled on their decease to a resting-place in the national Valhalla.

Dr. Stanley's literary career began in 1844, when he published the "Life and Correspondence of Dr. Arnold," whose funeral sermon he had been selected to preach in the chapel of Rugby school in 1842. His next work was entitled "Sermons and Essays on the Apostolic Age," published at Oxford in 1847; and this was followed by a "Lecture on the Study of Modern History," (1854)—and "Historical Memorials of Canterbury" (1855). "Sinai and Palestine in Connection with their History" appeared in 1857; "History of the Eastern Church" in 1861; "Lectures on the History of the Jewish Church" in 1862; and "Sermons Preached Before His Royal Highness the Prince of Wales during his Tour in the East in 1862: With Notices of Some of the Localities" in 1863. His last important work is "Memorials of Westminster Abbey," published since his appointment as Dean, and con-

taining much fresh historical matter drawn from the records of the venerable Abbey.

The portrait from which our engraving was made is from a recent photograph, and is a remarkably good likeness.

LITERARY NOTICES.

THE ERA OF THE PROTESTANT REVOLUTION. By Frederick Seebohm. New-York : Scribner, Armstrong & Co.

THE CRUSADES. By George W. Cox, M.A. New-York : Scribner, Armstrong & Co.

THE above-mentioned works are the two opening volumes of a series entitled "Epochs of History," edited by Edward E. Morris, M.A. The series, as explained by the editor, is intended to comprise a number of compact manuals, prepared by thoroughly competent hands, and sketching succinctly the most important epochs in the world's history, always making the history of a nation subordinate to this main idea. No attempt will be made to recount all the events of any given period; the aim being to bring out in the clearest light only the salient features and incidents of each epoch. Special attention will be paid to the literature, manners, state of knowledge, and all those characteristics which exhibit the life of a people as well as the policy of rulers during any period. Finally, each volume will be complete in itself.

Of course the value of such a series must depend mainly upon the manner in which the plan is carried out—in other words, upon the ability of the several writers selected to perform their special part of the work well; and it is gratifying to be able to say that the two initial volumes establish a standard of merit, which will render the series an epoch in the popular study of history, if the succeeding volumes are kept up to the same high level. Mr. Seebohm's "Era of the Protestant Revolution" is a work which of itself would confer lustre upon any historical series. It throws a flood of light upon a period which, in spite of all that has been written about it, still furnishes ample returns to original research and especially to original handling of its facts; and we venture to say there is no one, however familiar he may be with what is perhaps the most important epoch of modern history, who can read Mr. Seebohm's little manual without instruction. Nor are its comprehensive grasp and thorough mastery of facts, its sound judgment and command of "historical perspective," its only merits. It is written in a style which is a model of clear, concise, and animated narrative. Perhaps the only criticism to be made on Mr. Seebohm's work is, that it rather tends to enlist the sympathies, and even to

bias the judgment of the reader, in favor of Erasmus and the Oxford school of reformers, as against Luther. Not that injustice is done to the great German revolutionist—on the contrary, his distinctive merits have seldom been brought out more forcibly, and his figure loses nothing of its grand proportions in Mr. Seebohm's picture; but it is very evident that Mr. Seebohm thinks that if Luther had been as temperate as Erasmus—had possessed more of the latter's "sweetness and light"—that which proved a most destructive Revolution might really have been the Reformation which both alike professed to desire. This view of the case ignores a truth that seems to us clear: this, namely, that while Erasmus and his school were spreading a leaven which doubtless would ultimately have worked toward something of good, it could never have attained a success proportionate to the need, except under the leadership of just such a man as Luther, who could oppose to Rome a will as inflexible and a courage as daring as her own, and who would not hesitate to fight her enormous religious and political pretensions with the weapons of a fiery popular enthusiasm.

"The Crusades" is by no means so valuable a work as the preceding, and yet is an excellent treatise. Mr. Cox, the historian of Greece, could hardly touch any historical theme without putting the public under obligations; and his present work has the merit of being the first of a popular character in which the great religious wars of the Middle Ages have been subjected to the cold analysis of modern secular criticism. All the glamour which successive historians and popular tradition have grouped around the long struggles of Christendom to redeem the earthly dwelling-place of Christ from the pollution of the Infidel is here mercilessly stripped off; and the Crusades are revealed as they really were, false in motive, treacherous and scandalous in the means taken to promote them, and criminal in the wretched folly and stupidity which brought them to naught. As a specimen of Mr. Cox's more incisive criticism, and of the ruthless hand which he lays upon certain popular idols, we quote the opening paragraphs of his chapter on the Third Crusade:

"A halo of false glory surrounds the third crusade from the associations which connect

it with the lion-hearted king of England. The exploits of Richard I. have stirred to enthusiasm the dullest of chroniclers, have furnished themes for jubilant eulogies, and have shed over his life that glamour which cheats even sober-minded men as they read the story of his prototype Achilles in the tale of Troy. They have done even more; for, if we may believe the narrative, they excited the same vehement admiration in his most redoubtable enemy; and the romance of youth or even of maturer age fastens on the picture which exhibits the brother of Saladin in the thick of mortal fight as sending to him two Arabian chargers by way of lauding the hero for dealing death and wounds on a multitude of his people.

"When we turn from this picture to the reality, we shall see in this third crusade an enterprise in which the fiery zeal which does something toward redeeming the savage brutalities of Godfrey and the first crusaders is displaced by base and sordid greed, by intrigues utterly of the earth earthy, by wanton crimes from which we might well suppose that the sun would hide away its face; and in the leaders of this enterprise we shall see men in whom, morally, there is scarcely a single quality to relieve the monotonous blackness of their infamy; in whom, strategically, a very little generalship comes to the aid of a blind brute force, and in some of whom, personally, an animal courage or ferocity, which fears no danger and knows no fatigue, surmounts a thousand difficulties and charms the vast multitudes who find their highest delight in the worship or idolatry of mere power. As a military leader, Richard I. of England is beneath contempt when compared with the first Napoleon; but he may fairly compete with him as a criminal. Alaric the Goth and Attila the Hun never professed to be sovereigns of a civilized people; but in no sense have they a better title to be regarded as scourges of mankind."

But while thus severe on certain aspects of the Crusades, Mr. Cox is fully alive to the benefits which indirectly flowed from them; and his concluding chapter, "The Sequel of the Religious Wars," is not only a masterly piece of historical exposition, but proves that indignation at methods and objects can not blind him to remote and little-intended results.

To make the text more readily intelligible, each volume of the series contains outline maps, these being distributed in the text when such an arrangement renders them more easy of reference. There are thirteen such maps in "The Era of the Protestant Revolution," and one in "The Crusades."

SOME LEADING PRINCIPLES OF POLITICAL ECONOMY NEWLY EXPOUNDED. By J. E. Cairnes, M.A. New-York: Harper & Bros.

This is unquestionably the most important of recently published works on political eco-

nomy; its aim being not so much to furnish a systematic treatise as to clear away some of the thickets which have hedged in the "dismal science," and to substitute direct and well-cleared paths for the rather devious footsteps with which previous expounders have trodden over certain portions of the ground. While he believes that the broad principles which are the foundation of political economy are firmly fixed and above assault, and while he does not deny the truth of the final conclusions of the orthodox economic (or Mill) school, Professor Cairnes maintains that the *axiomata media* of the science are in many cases hastily assumed and incapable of being maintained against criticism—that in fact, between principles and conclusions, there is a broad field in which errors lie thick. Professor Cairnes is certainly right in supposing that in political economy, as in most other well-grounded sciences, this middle ground is the really important one, and that in its correct survey lies all hope of future advance. To give such a survey is his object in the present work.

As to the characteristic qualities of the work itself, we quote a few paragraphs from a careful notice in the *British Quarterly Review*:—"Professor Cairnes, instead of beginning like Mill with the theory of the production of wealth, starts at once with exchange. And from his own point of view he is quite right; for until value is explained he can not move a step. He opposes Professor Jevons's reduction of value to utility on very much the same grounds which have led many moralists to object to the reduction of virtue to utility, and with no more success; for after all, the question is one of terms, and if a man chooses to use utility in a wide enough sense, he may make it include value and virtue and every thing else. Probably Bastian's definition of value as the 'relation of two services exchanged' is the best yet given. Professor Cairnes proceeds to distinguish very justly what he terms normal from market value, and to set forth the laws which determine both of these in the case of all articles. The most noteworthy feature of this exposition is his division of the population into sets or castes practically non-competing one with another, and his argument to prove that articles produced within the limits of those various castes need not exchange one with another in proportion to their cost of production, but may follow other influences.

"Proceeding to wages, a subject which tests to the utmost all theories of value, Professor Cairnes attacks Mr. Thornton, against whom he tries to maintain the existence of a wage-fund. But that which Mr. Thornton asserted was only that the wage-fund was capable of

indefinite expansion, and that it could be larger or smaller at a given stage of the national wealth; and as Professor Cairnes would probably allow both of these points, there does not seem to be a dispute between the two authorities except as to degree. It is much the same again in the discussion of trades-unions. Mr. Thornton had asserted that trades-unions can raise wages. Professor Cairnes denies that this is possible except temporarily during periods of rapid economic progression. But as trades-unions have never tried to raise wages save in such times, Mr. Thornton's statement is at least excusable. He has probably made it too absolute, but then what economists call the stationary state is so far from all our thoughts that it probably did not occur to him to consider what the result of its advent would be. And if Professor Cairnes meant more than this, that rises in wages produced by unions can be only very temporary, surely facts are against him.

"Professor Cairnes's third part deals with international trade, and he seems to us especially happy when he points out why the theory of international trade, although not radically different from that of home trade, yet offers some remarkable differences. The chief causes of these are the barriers of political organization, of patriotism and religion, which prevent labor and capital from flowing freely over all countries. Space forbids us to enter further into this interesting subject: we can only, in concluding, thank Professor Cairnes for a work which is perhaps to the student of the present day second in importance only to the immortal treatises of Adam Smith and Mill, and hope that nevertheless criticism may thoroughly sift his teachings before they are put on the shelf amid the works of the *orthodox* school."

The portion of the work which will prove most interesting to American readers, and which, for them, gives it a quite peculiar value, is the long section devoted to the antagonistic systems of Free-Trade and Protection. A large part of this section deals directly with American facts and theories; and if we mistake not, it furnishes the clearest and most conclusive refutation which the more extreme dogmas of Protection have yet received.

INFANT DIET. By A. Jacobi, M.D. Revised, Enlarged, and Adapted for Popular Use, by Mary Putnam Jacobi, M.D. New-York: G. P. Putnam's Sons.

The substance of this excellent and most instructive little treatise was delivered two or three summers ago by Dr. Jacobi as a lecture before the New-York Medical Society. In

its original form it was somewhat technical in treatment, and was directed more particularly to an exposition of the methods of feeding infants which should be urged upon the poorer classes; but in the present edition, the technical terms have been translated into popular language, and various points upon which Dr. Jacobi, addressing a society of gentlemen already conversant with the science, barely touched, are carefully explained. With all the additions, however, the treatise is kept within very manageable limits, about one hundred and ten pages of large type sufficing to contain it all.

It is perhaps superfluous to say that Dr. Jacobi is considered the best authority in America on all subjects connected with the treatment of infants; but this fact must be understood in order to appreciate properly the exceeding value of this little book. If it could be placed in every mother's hands, one can not but feel that it would do much to arrest that frightful mortality which in this country carries off one quarter of the entire population in the first year of infancy.

A SYSTEM OF LOGIC, RATIOCINATIVE AND INDUCTIVE: Being a Connected View of the Principles of Evidence and the Methods of Scientific Investigation. By John Stuart Mill. Eighth Edition. New-York: Harper & Brothers. 1874.

This is a new edition of a work which is now universally recognized as one of the few really important contributions that have been made in our day to English literature. It has a special value as compared with previous editions, because it contains Mr. Mill's latest additions and revisions, and presents the work in the final shape in which it will take its place—no doubt a permanent place—in literature. Certain points have been elaborated, and others modified, as criticism and maturer thought, since the last preceding edition, have suggested their necessity. The longest of the additions belongs to the chapter on Causation, and is a discussion of the question how far, if at all, the ordinary mode of stating the law of Cause and Effect requires modification to adapt it to the new doctrine of the Conservation of Force.

The edition is printed from entirely new plates, in large readable type, and bound in a style appropriate for the library.

FOREIGN LITERARY NOTES.

FRANCE possesses at the present time 15,623 public libraries, furnishing students with 1,474,637 works. Paris is not included in this calculation.

A BI-CENTENARY edition of Bunyan's *Pilgrim's Progress* is in the press. It will be a reproduction in fac-simile of the first edition, with emendations borrowed from the second.

THE Khedive of Egypt is searching the mosques and monasteries of his dominions for MSS. to form a library at Cairo; he is said to have obtained thirty different MSS. of the Koran, and among them one computed to be 1150 years old.

STRAUSS'S 'The Old and the New Faith' has reached a seventh edition. His life of Jesus for the German people is being issued anew, in six parts. This is called the third edition.

THE Knebworth edition of Lord Lytton's works, now publishing by the Messrs. Routledge, will include, it appears, besides the novels and romances, the whole of his miscellaneous writings—hitherto very widely scattered, and many of them never before acknowledged.

It is announced that M. Emile de Girardin, notwithstanding his advanced age, has undertaken the chief editorial direction of *La France*, which recently passed into the hands of his old friend, M. Genty, and it is added that he will enter-upon his duties on November 1.

WE are glad to learn that Mr. W. Black, the author of 'A Princess of Thule,' will shortly publish a number of short tales under the title of 'The Maid of Killeena, and Other Stories.' The chief story, giving the title, is Hebridean, and deals with the life of the fisher-people.

MR. KINGLAKE has nearly completed his history of the campaign in the Crimea. It is really time that he had finished it. Twenty years is a long period to take in writing the history of one year's fighting. Moreover, Mr. Kinglake is getting on in years, and has just reached his grand climacteric, having been born in 1811.

IT is stated that Mr. Froude has been accepted by Mr. Carlyle as his biographer, and has had all the materials in Mr. Carlyle's possession bearing on the work placed at his disposal. It is also understood that Mr. Froude will be appointed sole literary executor of Mr. Carlyle.

M. GUIZOT, who died at the age of eighty-seven, was the senior of the forty French Academicians. The eldest now are M. Patin, eighty-one; M. Mignet, seventy-eight; and MM. de Rémusat and Thiers, seventy-seven. The youngest are M. Alexandre Dumas, fifty; M. Ollivier, forty-nine; and M. Mézières, forty-eight. There are now two

chairs vacant—those of M. Jules Janin and M. Guizot.

UNDER the title of "English Men of Science," Mr. Francis Galton will soon publish a volume giving very complete statistics of the "Nature and Nurture," "Race and Birth-place," "Occupation of Parents," and "Hereditary Pedigrees" of English scientific men. It will develop in a special department, in greater variety of detail, the branch of inquiry instituted by its author in his book on "Hereditary Genius."

AMONG the Syrian MSS. in the Ambrosian Library at Milan is a copy of the Peshito version of the Old Testament, which may be assigned to a period as remote as the sixth century. It is proposed to reproduce this ancient MS. in fac-simile by means of photolithography, under the direction of the Rev. Dr. A. Ceriani, the chief librarian of the Ambrosian. The edition will be in two volumes folio, and will consist of 660 photographed pages and about 60 pages of letterpress.

MR. GUDBRAND VIGFUSSON, who is at present in Sweden, has discovered among the MSS. of the University Library at Upsala, a previously unknown perfect copy of the *Orkneyarsaga*, which hitherto has been known only as containing various lacunæ; these are now all filled up. The newly-discovered passages of the Saga, one of which is described as being of peculiar interest as giving a unique sketch of the fisher-life of primitive Scandinavia, will be brought to England, and published there by Mr. Vigfusson.

MESSRS. WILLIAMS & NORGATE (London) are about to publish *Lost and Hostile Gospels*, by the Rev. S. Baring-Gould, containing an account of the Toledoth Jescher, two Hebrew Gospels circulating among the Jews in the Middle Ages; with a critical investigation of the notices of Christ in the Talmud, as well as in Josephus and Justus of Tiberias. To this is added an investigation into the extant fragments of Gospels circulating in the first three centuries, which the author believes to have been drawn up either under Petrine or Pauline influence, whilst the canonical Gospels sprung from a Johannite party of conciliation.

THE small University of Jena seems to be bent on reviving the literary traditions which have given it so high a place in German literature. Not only has it set on foot an excellent Review of current learned literature, which proves a formidable rival to the *Centralblatt*, but it is on the point of starting a new organ of scientific theology in its widest sense, to which most of the leading liberal theologians

of Germany and Holland have promised contributions. The title is to be *Jahrbücher für Protestantische Theologie*, and the editorship divided between Drs. Hase, Lipsius, Pfeiderer, and Schrader, members of the theological faculty at Jena. Subscription price, 5 thalers, or 15s., a year.

THE paternity of the cynical "Après moi le déluge," sometimes ascribed to the Prince of Metternich, senior, sometimes to Louis the Fifteenth, really belongs, it appears, to Madame de Pompadour. We find, indeed, in 'Le Reliquaire de M. Q. de La Tour, peintre du Roi Louis XV., par Ch. Demaze (just issued, Paris, E. Leroux), among numerous unpublished letters of Voltaire, Mlle. Fel, Marmontel, Madame de Lamballe, etc., a note of Mlle. Fel, in which she says that while La Tour was painting the portrait of Madame de Pompadour, the King, having just heard the news of the defeat of Rosbach, came in very cast down. Madame de Pompadour told him he ought not to grieve so much, that it would impair his health; besides, she added, "après nous le déluge!"

A GREAT literary curiosity is now for sale at Peking. It consists of a copy of a gigantic work, composed of 6109 volumes, entitled 'An Imperial Collection of Ancient and Modern Literature.' This huge encyclopædia was commenced during the reign of the Emperor Kang-he (1662-1722), and was printed at the Imperial Printing-Office, where a complete font of copper type was cast for the purpose. Its contents are arranged under thirty-two divisions, and embrace every subject dealt with within the range of Chinese literature. Unfortunately, the greater part of the type employed in printing the work was, after the publication of the first edition, purloined by dishonest officials, and the remaining portion was melted down to be coined into cash. The result is that very few copies are now in existence, and still fewer ever come into the market. The price asked for the present copy by the Chinese owner is, we believe, about 4000*l*.

AT the present moment, when the attention of many of us is directed to the history of St. Edmund of Pontigny, or Edmund Rich, Archbishop of Canterbury, it may be interesting to our readers to know that among a fine collection of original deeds lately acquired by the British Museum, and formerly in the possession of the Earl of Winchilsea, is an undoubted relic of the prelate. This relic, which has most certainly passed through the hands of the saint, is a Charter from the Archbishop of Canterbury, authorizing the priors of Kirkby and De Cumba to adminis-

ter justice in a law-suit respecting tithes, pending between the abbot and convent of Sulby, and Hugh, rector of Kyvillingsworth, county Leic. It is dated ii. non. Apr. in the third year of the Pontificate, *ie.*, A.D. 1236. To the deed is appended an original impression of the seal of the prelate; it is, unfortunately, imperfect, and only the central portion remains of what was a fine ogival, or pointed oval seal, bearing on the obverse a full-length figure of the archbishop in ecclesiastical habit, with the pallium and staff, and elevating his right hand in the act of bestowing a benediction.—*Athenæum*.

SCIENCE AND ART.

RESPIRATION OF PLANTS.—The *Revue Scientifique* gives a long and interesting account of the researches into the respiration of plants which M. Corenwinder has communicated to the Société des Sciences of Lille. For many years the functions of the vegetable kingdom were represented as being of an opposite kind to those of animals. Plants grew to furnish food for animals, and to render animal life possible; they formed intermediate principles which animal life destroyed; animal excretions were the natural nutriment required for vegetable life, and plants purified the air which animals deteriorated; and finally, respiration, the most continuous function of our organism, was in animals a process of absorbing oxygen and evolving carbonic acid, and in plants an absorption of carbonic acid and an evolution of oxygen. The idea arising from these views was that of harmonious opposition. Claude Bernard's experiments showing the formation of one of the most important of the intermediate principles, sugar, in the liver of animals, overthrew this theory, and suggested new views in harmony with the general tendencies of science, and led to comparisons of plants and animals founded upon their resemblances rather than upon their differences. In tracing these resemblances considerable difficulties were experienced in relation to the function of respiration, and it is these which M. Corenwinder claims to have removed. The reviewer remarks that since the respiration of plants was first regarded as an exhalation of oxygen derived from the carbonic acid of the air, experiments, which are now old, materially limited the force of this explanation. It has been long known that this mode of respiration depends on the action of solar rays, and is confined to portions of plants containing the green matter chlorophyl. It was then discovered that flowers not colored green, and even green parts in the dark, did not limit

their action to absorbing carbonic acid and setting free its oxygen; on the contrary, they absorbed oxygen and exhaled carbonic acid as animals do. Hence arose the ascription to plants of two modes of respiration, one nocturnal and the other diurnal, the latter being regarded as the chief or true respiratory process. M. Corenwinder's investigations show that what has been considered diurnal respiration—viz., absorption of carbonic acid by the chlorophyl—is a digestive act, as Claude Bernard supposed, and that the real respiration of plants resembles that of animals. Buds, young shoots, and growing leaves for a certain time absorb oxygen and exhale carbonic acid in an ostensible way and without interruption by day or night, except in the spring, when the nocturnal temperature is low, and the process is scarcely apparent. Light and heat accelerate it. As the buds or leaves grow beyond a certain point of development, this absorption of oxygen and exhalation of carbonic acid diminishes sensibly, and ceases to be apparent when they are fully grown. The amount of this action observable in any plant is proportioned to the quantity of leaf, etc., in active growth. The limit beyond which plants cease to exhale carbonic acid in an ostensible way during the day, varies much according to the species, some manifesting it a long while, others losing the faculty quickly. In the first category M. Corenwinder places *Diclytra spectabilis*, and in the latter beet-root leaves.

FRENCH REMEDY FOR NEURALGIA.—A remedy named 'aqua-puncture' has been introduced in France for the treatment of neuralgia. It may be described as a force-pump which can be carried about, and placed on a table, with a small flexible tube about two feet long, so constructed as to deliver a thread of water from its extremity with such force as to pierce leather. In operating on a patient afflicted with neuralgia, the piston is worked a few times, to expel the air from the tube; the point is then held about half an inch from the painful spot, the pump is worked, and the thread of water plays on the skin. Presently, a white vesicle appears on the spot where the water strikes; and any number of punctures may be made at the discretion of the operator, and in proportion to the extent of the pain. At first, the skin around the vesicles becomes red; but after a few hours, the vesicle and the redness disappear, leaving only a small black point which is the crust formed by the drying-up of a drop of blood in the puncture. The operation is described as painful; but the relief it produces is so great, that patients always call for a repetition whenever their neuralgic pains return.

POWER OF THOUGHT IN VERTEBRATE ANIMALS.—Dr. James Byrne, Dean of Clonfert, read a paper at the recent British Association meeting on the development of the powers of thought in vertebrate animals. He set out by showing, from a minute analysis of three different instances, that the difference between the mental action of the lower orders of vertebrate animals and that of the higher consists essentially in the fact that the lower orders can comprise in one act of thought only what can be perceived by sense all at the same time, while the higher orders can comprise in one act of thought a series of successions in time, so as to think a single object of sense as part of such a series, and the highest can comprise in one act of thought an entire class of co-existence or successions so far as to combine with a particular fact the common element of co-existence or succession belonging to the class. With regard to the three lobes of the brain in man, he had arrived at the conclusion that the anterior lobe was connected with the thinking of single objects of sense; that of the middle lobe with the act of thinking such objects with a sense of a succession of them in time, and as part of that succession; and those of the posterior lobe with the act of thinking a co-existence or succession of them as a case of general principle.

WHY THE POLARIS RETURNED.—Dr. Emil Bessels has addressed a letter to the *Allgemeine Zeitung* from the Smithsonian Institute at Washington, in which he explains at length the reasons which led to the return of the *Polaris* expedition before the appointed time, and when it had only reached 83° N. lat. He asserts that the death of Captain Hall in no way influenced the survivors in their decision to return without having accomplished the main object of the expedition, but that, on the contrary, the result must have been precisely the same had he lived, since the *Polaris* had sprung a leak twelve feet below the water-line, which it was found impossible to stop, while her position was rendered most dangerous by the continual pressure against her side of the great iceberg which lay between her and the shore. When towards the end of the winter the N.E. storms began to set the ice in motion, the *Polaris* was driven helplessly out towards the sea, at the very time that it was necessary to work the pumps almost incessantly. As this could only be effectually done by the aid of steam, the coal supplies rapidly diminished, and under these circumstances the officers in command of the ship, after the death of Captain Hall, had no alternative but to return; to have persevered would simply have been to incur certain destruction. In regard to the opinion expressed by some Ame-

rican papers that the officers of the *Polaris* should have tried to advance northward in sledges. Dr. Bessels states that the sea-ice was in constant motion, owing to the mildness of the season, and was so rough and uneven that there was not more than a couple of square miles of smooth ice over the entire area of Robeson's Channel. Violent storms prevailed, moreover, all the winter in the ratio of 75 per cent of the entire period, and carried the snow off the land in sudden squalls, heaping it up at some spots in huge drifts, and leaving the ground denuded at other places and unfit for sledges. Dr. Bessels draws attention to the numerous incidental and uncontrollable causes on which the success of Arctic expeditions must always depend, and he points out how little the courage and endurance of the bravest and most determined explorers can influence the result of such enterprises.

PRACTICAL STUDY OF THE HABITS OF INSECTS.—Dr. Packard, of Salem, Massachusetts, observes that entomologists are wanted who, instead of studying exclusively the structure of insects, will study their habits, and make known to gardeners and farmers those which are mischievous, and those which are beneficial. There are, he says, more than 50,000 species of insects in the United States, and of this large number 10,000 are found in the State of Massachusetts. Among the 10,000 there are 'at least 1000 destructive species.' According to Dr. Packard, the ravages of these destroyers are 'really appalling,' and are 'to be estimated by hundreds of thousands of dollars.' It is obvious that no means of checking the mischief can be employed until the particular way in which each species does its particular mischief has been ascertained.

HEALTHY AND UNHEALTHY FERMENTATION.—Pasteur, a member of the Academy of Sciences at Paris, one of the ablest chemists of the day, has given a practical turn to his researches on fermentation. In a communication to the Society for the Encouragement of National Industry, he states that he has succeeded in brewing beer which will not alter in any climate, and may be kept an indefinite time. Ordinary beer, as is well known, is very liable to change, especially in hot weather. M. Pasteur shows that this deterioration is a consequence of unhealthy fermentation; that with perfectly pure yeast, which he has succeeded in making, a healthy alcoholic fermentation can be produced, even in the temperature of summer. The process for making the yeast, and the kind of apparatus required, are to be described in a future communication. Meanwhile, it is something to be informed on such

good authority, that the use of ice, and other expensive precautions, to which brewers have recourse, may in future be dispensed with, and to know that methods are available by which unhealthy ferments can be detected, and the conditions of their existence ascertained.

RABIES IN ANTS.—Corrosive sublimate, it is said, has the most remarkable effect upon ants, especially the variety of insect living upon fungi found upon leaves of trees. The powder, strewed in dry weather across their path, seems to drive every ant which touches it crazy. The insect runs wildly about and fiercely attacks its fellows. The news soon travels to the rest, and the fighting members of the community, huge fellows some three quarters of an inch in length, make their appearance with a determined air, as if the obstacle would be speedily overcome by their efforts. As soon, however, as they have touched the sublimate, says the narrator in the *Naturalist in Nicaragua*, all the stateliness leaves them: they rush about: their legs are seized hold of by some of the smaller ants already affected by the poison, and they themselves begin to bite, and in a short time become the centres of balls of rabid ants. As these insects are one of the scourges of tropical America, destroying vegetation in immense quantities, it is probable that this extraordinary remedy may be of considerable service to agriculturists.

ROAD-BUILDING IN INDIA.—A paper read before the London Institution of Civil Engineers shows what prodigious difficulties are encountered by those who construct roads in the hill-country of India, where no earth-work will resist two rainy seasons. In the Himalaya, the annual rainfall amounts to two hundred and twenty inches, and at times five inches fall in an hour; hence a road, unless constructed of the best material, and with due precautions, may be washed away at short notice. Above eight thousand feet, the snow must be guarded against. In one place an avalanche half a mile long and a hundred feet thick came down, carried away a stone bridge of forty feet span, and remained unmelted six months. Experience has shown that where forests prevail it is best, though with more labor, to cut the road through the forest, because the trees break the force of the rain, and the mould beneath passes the water gently away; whereas on a bare hillside the rush of water would sweep every thing before it. Sometimes a road is required along the face of a vertical cliff; and a shelf is erected, or a half-tunnel is blasted out, which, with the shelf, makes a sufficient thoroughfare. Where wood is plentiful, it is found more expeditious to heat the rock by great fires, and then flood

the hot places with water, whereby the rock breaks away in large masses, and with far less trouble than in blasting. In the preparation of a preliminary gangway along the face of the cliff, there is abundant room for the exercise of ingenuity, for it involves the problem of standing on nothing.

VARIETIES.

IMBEDDED FROGS.—One of the most remarkable, and perhaps the least explicable, facts connected with this family of reptiles, is the alleged inclosure of frogs and toads in solid rock and in the heart of trees, where they are supposed to have existed for unknown centuries, deprived of all access to food or air, and yet alive when extricated. The stories relating to this subject are many and marvellous; men of science do not think it safe to believe them, but at the same time they are convinced that there is some truth in the matter, however difficult it may be to get at. Smellie, in his *Philosophy of Natural History*, refers to an account in the *Memoirs of the Academy of Sciences*, of a toad found alive and healthy in the heart of an old elm; and of another discovered near Nantes in the heart of an old oak, without any visible entrance to its habitation. In this second instance, judging from the number of rings in the wood, and the depth of the imbedding, it was inferred that the animal must have been imprisoned there at least eighty or a hundred years. Mr. Jesse, the naturalist, found a frog in a mulberry-tree; the annular layers of wood were gradually but surely inclosing him. The imprisonment of frogs and toads in stone is, however, much more remarkable than in the trunks of trees, even if we believe only a modicum of the narratives published on the subject. The statements are unmistakable, and are made in all good faith, that living frogs and toads are occasionally met with thus imbedded, and that exact impressions of their bodies, corresponding to their respective sizes, are left in the cavities of the stone where they are found. Chatsworth is credited with having once had (we do not know whether it still exists) a marble chimney-piece with a print of a toad in it; there was a traditionary account of the place and manner in which it was found. The *Mining Journal* contains an account of a discovery made by a miner at Pen-y-darran, near Merthyr Tydvil. When working at a depth of 45 feet, his mandrel struck into a piece of shale; a frog, large but weak, leaped out and crawled along the ground with some difficulty; the eyes were full-sized, but apparently sightless;

the mouth seemed as if permanently closed, and the spine was twisted as if it had been compelled to adapt itself to a narrow and ill-shaped space. The frog, when liberated, grew in size and weight, but could not be fed; he appeared to breathe through the skin covering the lower jaw. We certainly can not blame Ellis, the miner, for exhibiting his prodigy to admiring visitors at a public-house in Merthyr; and considering the intensity of popular belief on this subject, we must view indulgently his inscription: "The greatest wonder in the world! a frog found in a stone forty feet below the surface of the earth, where it has been living without food for the last five thousand years!"—*All the Year Round*.

THE STUARTS. Since the time of *Œdipus* no royal line has equaled that of the Stuarts in its calamities. The First James, adorned with the graces of poetry and chivalry, a wise legislator, a sagacious and resolute king, perished, as we have seen, in his forty-fourth year. His son, the Second James, was killed in his thirtieth year at the siege of Roxburgh Castle, by the bursting of a cannon. The Third James, after the battle of Sauchieburn, in which his rebellious subjects were countenanced and aided by his own son, was stabbed, in his thirty-sixth year, beneath a humble roof by a pretended priest. That son, the chivalrous madman of Flodden, compassed his own death and that of the flower of his kingdom, while only forty years of age, by a piece of foolish knight-errantry. At an age ten years younger, his only son, James the Fifth, died of a broken heart. Over the sufferings and follies, if we may not say crimes, and over the mournful and unwarrantable doom of the beauteous Mary, the world will never cease to debate. Her grandson expiated at Whitehall, by a bloody death, the errors induced by his self-will and his pernicious education. The Second Charles, the Merry Monarch, had a fate as sad as any of his ancestors; for though he died in his bed, his life was that of a heartless voluptuary, who had found in his years of seeming prosperity neither truth in man nor fidelity in woman. His brother, the bigot James, lost three kingdoms, and disinherited his dynasty, for his blind adherence to a faith that failed to regulate his life. The Old Pretender was a cipher, and the Young Pretender, after a youthful flash of promise, passed a useless life, and ended it as a drunken dotard. The last of the race, Henry, Cardinal York, died in 1804, a spiritless old man, and a pensioner of that House of Hanover against which his father and brother had waged war with no advantage to themselves, and with the forfeiture of life and

lands, of liberty and country, to many of the noblest and most chivalrous inhabitants of our island.—*Fraser.*

MACHINERY A SOURCE OF RUIN.—On any given farm in Switzerland or Bavaria, fifty years ago, the master and servants lived, in abundance, on the produce of their ground, without machinery, and exchanged some of its surplus produce for Lyons velvet and Hartz silver (produced by the, unhappy mechanists and miners of those localities), whereof the happy peasant made jackets and bodices, and richly adorned the same with precious chain-work. It is not more than ten years since I saw in a farm-shed near Thun three handsome youths and three comely girls, all in well-fitting, pretty, and snow-white shirt and chemisette, threshing corn with a steady shower of timed blows, as skilful in their—cadence, shall we, literally, say?—as the most exquisitely performed music, and as rapid as its swiftest notes. There was no question for any of them, whether they should have their dinner when they had earned it, nor the slightest chance of any of them going in rags through the winter. That is entirely healthy, happy, and wise human life. Not a theoretical or Utopian state at all; but one which over large districts of the world has long existed, and must, thank God, in spite of British commerce and its consequences, for ever, somewhere, exist. But the farm, we will say, gets over-populous (it always does, of course, under ordinary circumstances), that is to say, the ground no longer affords corn and milk enough for the people on it. Do you suppose you will make more of the corn, because you now thresh it with a machine? So far from needing to do so, you have more hands to employ than you had—can have twelve flails going instead of six. You make your twelve human creatures stand aside, and thresh your corn with a steam-engine. You gain time, do you? What's the use of time to you? did it not hang heavy enough on your hands before? You thresh your entire farm produce, let us say, in twelve minutes. Will that make it one grain more, to feed the twelve mouths? Most assuredly the soot and stench of your steam-engine will make your crop *less* next year, but not one grain more can you have to-day. But you don't mean to use your engines to thresh with or plough with? Well, that is one point of common sense gained. What will you do with them then?—spin and weave cotton, sell the articles you manufacture, and buy food? Very good; then somewhere there must be people still living as *you* once did—that is to say, producing more corn and milk than they want, and able to give it to you in exchange for

your cotton, or velvet, or what not, which you weave with your steam. Well, *those* people, wherever they are, and whoever they may be, are your lords and masters thenceforth. *They* are living happy and wise human lives, and are served by you, their mechanics and slaves. Day after day your souls will become more mechanical, more servile, also you will go on multiplying, wanting more food and more; you will have to sell cheaper and cheaper, work longer and longer, to buy your food. At last, do what you can, you can make no more, or the people who have the corn will not want any more; and your increasing population will necessarily come to a quite imperative stop—by starvation, preceded necessarily by revolution and massacre. And now examine the facts about England in this broad light. She has a vast quantity of ground still food-producing, in corn, grass, cattle, or game. With that territory she educates her squire, or typical gentleman, and his tenantry, to whom, together, she owes all her power in the world. With another large portion of territory—now continually on the increase—she educates a mercenary population, ready to produce any quantity of bad articles to anybody's order; population, which every hour that passes over them makes acceleratingly avaricious, immoral, and insane. In the increase of that kind of territory and its people, her ruin is just as certain as if she were deliberately exchanging her corn-growing land, and her heaven above it, for a soil of arsenic, and rain of nitric acid.—*Fors Clavigera.*

ASPIRATION.

Oh, snows so pure! oh, peaks so high!
I lift to you a hopeless eye.

I see your icy ramparts drawn
Between the sleepers and the dawn.

I see you, when the sun has set,
Flush with the dying daylight yet.

I see you, passionless and pure,
Above the lightnings stand secure;

But may not climb, for now the hours
Are spring's, and earth a maze of flowers.

And now, 'mid summer's dust and heat,
I stay my steps for childish feet.

And now, when autumn glows, I fear
To lose the harvest of the year.

Now winter frowns, and life runs slow,
Even on the plains I tread through snow.

While you are veiled, or dimly seen,
Only reveal what might have been;

And where high hope would once aspire
Broods a vast storm-cloud dealing fire.

Oh, snows so pure! oh, peaks so high!
I shall not reach you till I die.





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